5: Schwimmer E-4,5 (1966-1967) 1973
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Though Monckton reports (1921) a few large villages in the early post-contact period, it is only recently, in response to Australian pressure, that multi-clan villages, with populations ranging from 100 to 500, have become common. Most of the plantations found in the Northern district have been established by Australian ex-servicemen supported by government loans. A number of Orokaiva have been drawn to work on these plantations, others to jobs in Popondetta, others again to service with the police, the armed forces or employers outside the district. Such migration has substantially reduced the proportion of the male village population group.[2]

2. *Technology and Aesthetics*

We possess only the briefest description of Orokaiva industry (in Williams 1930). Although I did collect additional data, the traditional technology has been transformed to such an extent that my data must needs be fragmentary. The only axes and adzes now in use are made of steel; most of the various stone-made cutting tools described by Williams are no longer in use, being replaced by the ubiquitous bush knife wielded by young and old, male and female. One exception is worth noting, if only to emphasise an element of continuity: cockle shells are still used for the scraping of coconuts and for the shaping and decorating of pots. Most of the needles used by women are still made of flying fox bones (*poma*), even though a few needles have at times been obtained from the Mission. While files for sharpening tools are necessarily made of steel, rough leaves still serve as tools for scraping pots, smoothing down wood, etc. The same mixture in the use of basic tools is found in agriculture, hunting, and fishing: we still find the digging stick but also the axe; traditional hand nets and fishing spears (with steel tips), but also snorkels. For hunting, traditional devices have been almost entirely replaced by the shot gun. The old technology is still basically intact in those few industries which are directly related to ceremonial life: the making and decorating of loin cloths, feather headdresses, ceremonial weaponry, musical instruments such as drums. Certain other specifically feminine artifacts (mats, baskets, string bags) are still produced and in use, while much of the contemporary Orokaiva house-building technology is traditional. Fine wickerwork for ceremonial objects (armlets, spear decorations, etc.) is still made by some of the older men. Orokaiva women have almost stopped making pots, though this was an important industry in pre-contact times. While trade goods are used for everyday purposes, such pots as are still made serve as gifts to women at the time of marriage. They are kept for sentimental reasons, but we were able to see only very few.

An everyday Orokaiva meal consists of taro, often with a few vegetable condiments: coconut milk, cordyline tips, or edible pitpit,[3] or one of a number of herbs, sometimes of supposed medicinal value. Much care is devoted to the cooking of the taro and variety is provided partly by a choice from many varieties of taro growing in most gardens. In the dry season, any of a number of subsidiary foods (sweet potato, German taro, yam, banana, breadfruit and several others) may be added to make the taro stretch further. Meat or fish is eaten only rarely, usually on festive occasions. Foods like tea, sugar, bread and salt are also reserved for such occasions. Although several traditional methods of

movements were more extravagant and exciting than those of the others; they were allowed, and did, break out of line for extra flourishes that took their fancy while still remaining true to the spirit of each type of dance. A notable feature of the dances is the identification with spirits and animals on the part of the dancers. Mistakes in drumming and dancing are thought very inauspicious for the well-being of the community. Although men and women do not dance as partners, the dances give men a chance to show off their attractions, while the women give signs to men who impress them.

3. *Economics*

Production. The Orokaiva work force involves, in some ways, everybody from the age he can walk almost until the day of death. The very young and the very old are expected to make whatever contribution they are capable of. The division of labour between the sexes has been the subject of enquiry by Williams, Waddell and Krinks. A sex basis in the division of labour is obvious in a great many activities, as the charts clearly show.[7] But even where activities are 'shared' between men and women, it is most common to see each sex group work at a different aspect of the task; they rarely do exactly the same job. Calculations by Waddell and Krinks show that the Orokaiva are fairly fully occupied in terms of the number of weekly working hours. Their calculations suggest that, given the present technology and social organisation, there is comparatively little slack in the working week that could be taken up by cash cropping activities on a major scale.

The working group is most frequently the household, occupied in the *pure.* Sometimes close relatives work together on larger tasks, helping each other in turn. Although old men do maintain their own gardens, they tend to receive frequent help from sons, sons-in-law and sometimes sisters' sons. Co-operation between men is also common during hunting and housebuilding. Co-operative groups of five or more men or women are also seen occasionally, e.g. for making roofing for a house, planting and harvesting yams. Co-operation of a total village is rare, but there are co-operative fishing and hunting expeditions. Activities related to feasting tend to be communal also.

Distribution. The Orokaiva have a subsistence economy where the bulk of goods produced are consumed by the household of the producer. Though patterns of exchange will take up a good part of the present work, it is necessary to state at the outset that only a small percentage of everyday produce enters the exchange system in any way. Waddell estimates that only 4.1 per cent of taro produced in Sivepe is disposed of by sale, gift exchange or barter. While the proportion is twice as high in Inonda, this is due to quite recent changes in the economic network in that area. One is bound to agree with Waddell that food exchanges, whatever their economic utility, are no great drain on Orokaiva resources. Of the produce entering the exchange network only a minute proportion leaves the village where it is grown. At a comparatively large feast I saw in Inonda in 1967, I estimated that Inonda was giving away, at the very utmost, 5 per cent of its annual production. As plantings are always made on a scale sufficient for survival *even if the harvest is poor*, there will be a surplus of at least 5 per cent after a good growing season. Unless the growing season is good,

[TEXT CONTINUED ON PAGE 29]

5: Schwimmer E-4,5 (1966-1967) 1973
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TABLE II/5

SIVEPE: THE DIVISION OF LABOUR BY SEX
(*Source*: Waddell and Krinks 1968: 100)

	Men	*Women*
Total hours active	13,934	15,041
Total weeks present	349.7	363.1
Mean activity week	39.8	41.4

Activity	*Total hours*	*Percentage contrib.**
Men		*Men*
Rubber – harvest	157.4	100
Recreation	194.7	97
Hunting	1,289.3	93
Preparation of tools & equip.	198.1	91
Church work	182.0	88
Construction	1,160.5	87
Coffee – market	77.9	85
Other crops – plant	41.8	84
Sago-making	319.7	81
Yams – plant	225.4	81
– maintain	45.3	79
Purchasing	273.6	77
Taro – plant	1,714.9	75
Social obligations – other	732.7	73
Women		*Women*
Sweet potato/yam – market	51.2	100
Cooking	3,442.0	97
Sweet potato – harvest	900.2	92
Care of the sick	172.5	90
Taro – market	54.3	90
– harvest	2,133.4	87
Washing	117.5	75
Both		*Men*
Rubber – market	36.1	66
Fencing	45.7	64
Coffee – harvest	353.1	62
Miscellaneous	260.6	62
Clearing	2,614.7	61
Coffee – maintain	74.5	60
Social obligations – marriage	32.7	60
– visiting	873.9	56

5: Schwimmer E-4,5 (1966-1967) 1973
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TABLE II/5 (*continued*)

Activity	*Total hours*	*Percentage contrib.**
Both		*Men*
Paid work	1,128.8	56
Other crops – harvest	1,109.0	54
Sick – personal	442.6	53
Yam – harvest	412.6	53
Coffee – process	398.4	53
Collecting firewood	234.1	52
Social obligations – mourning	783.9	51
Other crops – market	66.9	51
Church services	1,946.2	46
Meetings	898.7	44
Fishing	165.0	44
Council work	824.2	42
Taro – maintain	2,551.6	37

* Where one sex carries out more than two-thirds of the work and where the total amount exceeds .01 per cent (29.0 hours) of the total hours active for the whole sample.

there is a ritual prohibition, for which I shall later quote the mythological charter, to hold a feast at all.

In any case, there seem to be two basic limitations to the size of a feast. First, the custom of restricting the number of guests to the inhabitants of *one* village, usually of about the same size as the inviting village. There are of course many variations to this custom but the principle of limitation is usually present. Secondly, the generosity shown to the guests, though outwardly most impressive, is restricted by the amount the guests can physically carry away. Though the food lying on the feasting platform looks inexhaustible to the observer, and the guests are capable of carrying away a heroic amount of food after a feast, the overall economic impact is minor.

Waddell remarks most interestingly that, in comparison with the main crops (taro, bananas and sugar-cane), a far higher proportion of dry season crops enter the exchange network. This applies especially to sago, breadfruit, sweet potatoes and yams. Waddell does not discuss nuts, but these are often given to friends and function as the small change of sociability. Both *tauga* and *puga* are stored for the season of shortage; betelnut is a traditional trade item. All vegetable produce is nowadays considered suitable for marketing. Villages near Popondetta have far more opportunity to sell or barter produce than the villages on the Mount Lamington foothills.

It is customary for animal food to enter the exchange network, either as a gift or as part of a festive meal to which guests are invited. Meat is ceremonial food, eaten for instance to mark the settlement of a quarrel. It is considered somewhat

[TEXT CONTINUED ON PAGE 31]

5: Schwimmer E-4,5 (1966-1967) 1973
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their home country. American troops, by their equal treatment of Negro soldiers, created the impression that racial barriers had no place in their society! The troops' friendliness to the Papuans was tangibly expressed by gifts, not only of tobacco and other small luxuries, but also of discarded tools and equipment still used in villages today. It is in these events that the Orokaiva saw the portent of the coming of a new era.

The Eruption of Mount Lamington. In 1951, a Peléan eruption occurred on Mount Lamington. The *nuée ardente* produced by this eruption completely devastated a surrounding area of 68 sq. miles (Taylor 1958). Almost 4,000 people were killed and there were hardly any survivors of the numerous Sangara tribe. Those who did survive were provided with food, medicines and other comforts by the government and were for some time maintained in evacuation camps. The evacuees were not at once allowed to return to their villages as the authorities feared further explosions in the mountain. Some officials saw in this sequence of events a chance to create Papuan model communities with up-to-date socio-economic institutions. These plans for village reform, whatever their merits, were not realised at that time, partly because the danger of further explosions was soon greatly reduced, in the view of vulcanologists, so that the people were allowed to go back to their old village sites; partly also, because the reforms were not favoured by the Australian administration which assumed power after the defeat of the Labour Government in 1951.

Intensification of Development Policy. Large scale, expertly planned social, economic and political development did not start in Papua until around 1960 (Parker 1966:189). In the economic sphere the first major development success was the building up of a coffee industry based on the production of indigenous growers using their own village land. While by far the largest quantity of this coffee is grown in the Highlands, the yield in the Northern District was enough to assure to any Orokaiva who entered the scheme an income of something like $60–100, in the year 1966–67. During that year all the villages I visited, both on the foothills and in the plains, were producing coffee. It was an activity in which any able-bodied man resident in a village would normally engage to a greater or lesser extent. Several factors aided the development of this industry.

Agricultural extension work to train the population of the Northern District in coffee growing began immediately after the eruption. A training school was set up in Popondetta. Papuan agricultural assistants were trained to give basic instruction and to distribute seed. These assistants spread knowledge not only while they were employed by the government, but even more when they went back to their villages and grew their own coffee.

Title improvement work is also beginning to contribute to agricultural development. Until 1956, the government kept entirely aloof from indigenous tenure problems and passed no ordinances enabling it to adjudicate in land disputes. By that time, however, it had become obvious that commercial arboriculture could be developed only to a limited extent unless a land registry was introduced and the traditional Orokaiva principle of maintaining residual rights in land was adandoned. Though the first attempts to change the land tenure system were unsuccessful, in 1967 it looked as though a very satisfactory procedure had been worked out. (See Ch. V.)

Road improvement was another necessary preliminary to significant village

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Orokaiva Coffee-Grower Society, a producers' co-operative formed for the purpose.

The Council is made up of twenty-six Orokaiva members who are paid a monthly stipend. However, in practice a government adviser attached to the Council appears to determine policy. Indigenous attitudes to the Council are analysed in detail in Schwimmer 1967. Together with the Coffee Society, it has offered the Orokaiva some political participation and the importance of this new departure is vividly recognised by the people.

The New Age. Since the Second World War, a great many ideas from the outside world have been communicated to the Orokaiva. I have already mentioned economic, and some political ideas; in addition, the Anglican mission began to attract many converts, especially after the Mount Lamington disaster. By 1964, the great majority of Orokaiva were baptised.

The establishment of the House of Assembly in Port Moresby, giving limited powers of political decision to Papuan representatives elected by universal suffrage, has introduced new patterns in village life: meetings with the local member, with other candidates, and with organisers acting for these candidates and presenting political argument. The personnel of the local government council tends to be deeply committed in national politics and to talk about political affairs when visiting villages.

During such discussions, the Orokaiva are beginning to learn that an end to Australian rule is conceivable and that they will have some voice in decisions relating to the independence of their own country. They fully recognise that this makes an immediate difference to the balance of power between themselves and

TABLE II/10

EDUCATION AND OCCUPATIONAL EXPERIENCE OF THE JEGASE AND SEHO CLANS OF SIVEPE COMPARED – ADULT MALES ONLY

Approximate Period	*Education*		*Occupational Experience*	
	Seho	*Jegase*	*Seho*	*Jegase*
Nil	6	6	4	5
1 year	–	1	1	2
2 years	–	2	1	–
3 years	–	1	–	–
4 years	–	2	–	2
5 years	–	–	–	1
6 years	–	1	–	–
7 years			–	–
8 years			–	–
Over 8 years			–	4
Data vague	2	1	2	–
Total	8	14	8	14

5: Schwimmer E-4,5 (1966-1967) 1973
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TABLE II/11

HOHORITA MALE ADULTS IN SKILLED OCCUPATIONS

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Occupation	*Resident*	*Non-Resident*	*Total*
Teacher	9	1	10
'Medical'	3	–	3
Driver	2	2	4
Shopkeeper	4	–	4
Other	2	2	4
Total	20	5	25

648 the Australian rulers, although they also know that so far the difference is not great.

177 Finally, broadcasting services and the messages transmitted by councillors have greatly increased their knowledge of the outside world. Through their transistor radios, they become aware of, and discuss, the affairs of the independent nations of Asia and Africa. They are thus beginning to feel part of the modern world.

5. *Field Locations*

101 I spent one year in the Northern District, travelling through it a good deal. My detailed data come mainly from three villages which I shall now describe briefly.[13]

Inonda. This was the first village I visited; I stayed there for eighteen days, returning later for a few brief periods. The village was previously reported on by
105 Crocombe and Hogbin, Krinks and Waddell. It lies eleven miles from Popondetta, on the road to Oro Bay, has seven dwelling houses and a population of forty-two. At the time of my visit, there was only one politically significant clan represented in the village, namely Andiriha, who had been driven from the foothills of Mount Lamington by the Sangara tribe some fifty years earlier. Inonda, like other Orokaiva villages, was laid out in an elongated rectangle, with the dwellings spaced at equal distances. Neat rows of palms, shrubs and floral borders interspersed with trees subdivided the central area between the houses so as to give each family a semi-private space. The village had an Anglican chapel, made out of a corrugated-iron storage shed, where a lay preacher gave services. There was also a corrugated-iron copra-drying plant, no longer in use. Just behind the village was a slab of concrete laid down by the army during the war, and now being utilised as the floor of a women's club house that was being built at the time.

Unlike the other villages I visited, Inonda is only partly Christianised, four of the households being pagan. Coffee gardens have been established only by the Christian families and the women's club, which is one of a number organised by the government for social development purposes, and is supported exclusively by the same families. Inonda was also unusual, at least in my experience, in having one leading family in control of virtually all forms of community organisation.

5: Schwimmer E-4,5 (1966-1967) 1973
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Sivepe has twenty-four dwelling houses and a population of 137. The two politically dominant clans are Jegase and Seho, but some families from the Sorovi clan had not long ago migrated to Sivepe from a neighbouring village (Garombi). Sivepe had been shifted recently to the present site so that decorative borders were not yet established, though such improvements were started during my stay. It was planned that the village would be rectangular in shape, with two long facing rows, as in Hohorita and Inonda, but a third row, supposedly temporary, had been established on the hill behind the planned site. In other respects, however, the same standard of village layout had been followed. The houses were roomier than in the other villages and had walls of horizontally laid shingles, an innovation of which the villagers were rather proud. 105

Sivepe has no chapel, but the Anglican mission station is less than a quarter of a mile away from the village. The school conducted on the station is one of the best in the Northern District; it teaches up to grade six and many of its students qualify for admission to secondary schools. The station also maintains a small field hospital, with a Papuan assistant medical officer in charge. For more serious cases the large government hospital at Saiho was used, a facility serving the whole of the Northern District, but in practice out of reach of distant villages like Inonda. Hohorita people, however, use it frequently.

Sivepe has been Christianised only very recently. There were no baptisms until after the eruption and the Seho clan did not join the Church until about 1963. Today very few pagans are left and they do not form a political or other faction. Leadership is shared between several strong personalities. Sivepe lacks residents who stand out by superior wealth or European education, but is rather more homogeneous in that respect than either of the two other villages. Money comes mainly from coffee and from remittances sent by relatives working outside the village.

Sivepe, like most of the Sasembata-Sohu valley, has an extremely dense population – about 180 per sq. mile. 161

REFERENCES

1 Brookfield uses the Klingebiel and Montgomery (1961) classification of land which distinguishes land areas by the degree of limitation to land use imposed by geographical conditions. Limitations may be due to terrain, lithology, soil, or climate. A large territory surrounding Mount Lamington falls in classes I to III (which means it is suitable for cultivation with a mild degree of limitation), as contrasted with most of the rest of New Guinea, where the limitations are much greater. 133 134

2 Figs. 1 and 2 give a general impression of the geography of the district: land systems, natural features, settlements roads, tribal areas, etc. Table II/1 shows the distribution of population in the Northern District of Papua. Table II/2 shows the age breakdown of the population in Sivepe and Inonda. Table II/10 shows rather strikingly how suddenly labour migration began: the men of the Seho clan of Sivepe were just a little too old to have been involved, but the Jegase clan, whose members were slightly younger, mostly spent some time on jobs outside the village before or shortly after marriage. 167 164 162

3 Orokaiva: *ina*; botanical: *sacharum edule*. 262

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quantities in some areas.(1)

After the turn of the century less emphasis was given to the policy of expanding indigenous plantings of cash crops and instead Papuans were persuaded to work as labour on European plantations. In 1906 the Lieutenant-Governor stated that not only was staff inadequate to enforce the 1894 regulation, but that where it was enforced the resultant income attracted traders whom he felt to be a bad influence on the Papuan people. Employment on European plantations, on the other hand, was considered to be beneficial.(2) This policy remained until after the first world war, though some Resident Magistrates also applied the regulations in order to extend native plantings.

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(1) For a more detailed study of the application of these regulations see Miles 1956 : 319-23.

(2) Territory of Papua Annual Report (hereafter abbreviated to P.A.R.) 1905-6 : 9.

Production and income

433 241 While official reports give laziness or misunderstanding as the reason for the lack of willing co-operation with the scheme, the reason given today by the people themselves is that the income was inadequate for the effort required.

[435] Table 1 shows the total production of coffee from plantations established under the ordinance in the Orokaiva area for the ten year period 1931-40, and the amounts paid to producers for it. The price per pound has been calculated and ranged from 4.5 pence (in 1932) at the highest to 2.1 pence (in 1938) at the lowest. The average price for the period was 2.6 pence per pound. (1)

433 434 245 [465] Table 2 shows that output per acre of land planted in coffee under the scheme averaged 681 pounds, which is a relatively high yield. At 2.6 pence per pound this would have given an income of £7.7.5 per acre. The total work force on all the plantations is estimated to have been about 700, so payment would have averaged £1.11.0 per worker per year, or less than 2 pence per day worked. The 15½ acres of coffee in the Ongoho block(2) would, assuming average yields, have given an annual income of £114.5.0, or just over £1.0.0 per worker, but informants today maintain that payment at Ongoho was usually 8/- to 12/- per man per year with young lads being paid 5/-. [464] Only on one or two occasions did the payout exceed £1. The total labour force in the nine villages which participated in the Ongoho block was probably close on 100 and yields per acre 465 were apparently lower than average. Enquiries at other communal plantations show that higher prices were paid in places [466] where a smaller labour force was working an equally large area. In Hohota, for example, £6 to £9 was paid per man in some years, but there the hours of work are said to have been 6 a.m. to noon six days a week, plus afternoon work at harvest-

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(1) The world trade depression had begun about the time the first coffee was coming into full production. The crop was marketed in Australia where it met strong competition from Java coffee.

(2) Our measurement of the planted area shows it to have been just over 15½ acres, though the area gazetted was only 15 acres.

[TEXT CONTINUED ON PAGE 17]

ing time. Humphries (1944 : 3) estimates the annual payment per man to have ranged from a few shillings to £4 per year.

At that time some of the young single men were going out to work on plantations in return for food, accommodation and a cash wage of £6 per year. All plantations had to supply tobacco, soap, sugar and meat each week-end, and some paid wages every month (usually 10/-). But payment in cash and kind was not the only incentive to taking employment outside the district. Perhaps the main reason was the experience involved, for it seems to have become a necessary prerequisite to manhood that a youth should have been away to work. The income acquired was used at least partly to supply his bride-wealth on his return.

From discussions with many Orokaiva people who were involved in the plantations it seems that they regarded the scheme as an imposition whereby the people were required to plant coffee which the government commandeered and sold to its own profit. The annual cash payment was not viewed as a price per pound but as a token payment by government for their labour.(1) Official reports (e.g. P.A.R. 1933-4 : 27) noted that the people "complain loudly" when the payment was not up to expectations and in 1939 a demonstration occurred when the money paid out at Higaturu was thrown on the ground by the recipients.

The plantations were undoubtedly overstaffed and workers should not have been under any strain to complete their tasks. With 700 workers for the 242 acres of coffee there was an average of nearly three workers to the acre, though allowance must be made for their having to carry the produce to the depot and in some cases to pulp it also. At Ongoho there were six to the acre, though walking to and from the job must have

(1) It is still quite widely held that produce prices are fixed by government, and that in the same way as Europeans are paid higher wages, they receive higher prices for their coffee. Humphries (1944 : 2) noted that the people regarded "working for the government" on native plantations as much less remunerative than working for a planter.

extension staff left, the internal tensions re-asserted themselves. [245] [578] [654] [435]

The people made an attempt to keep the garden working as the price of coffee was then 3/3 per pound. Persons from several sub-clans participated in harvesting, pulping and drying and a consignment of coffee was taken on foot to Popondetta (a distance of about seventeen miles each way by the paths then in use). For the first time women and children helped with the harvesting. The income from sales was distributed by the coffee boss, but disputes arose over the proportions due to the "landowners" for the use of the land and to the coffee boss for his supervision, as well as the relative shares to be given to those who had done the work, for some had not worked as many days as others. Members of other sub-clans again withdrew from the project. The coffee boss himself and some members of Hoiwo'undi sub-clan occasionally harvested a little coffee to provide money for particular needs, but most of it was left untouched. No further maintenance was done. When the Higaturu Council and its supervising officer, Mr. Normoyle, strongly advocated planting by individuals rather than groups, a number of people took seeds from the community garden and established their own individual coffee plots. [462] [464] [578] [433] [434]

When the Higaturu Council erected a coffee factory in Popondetta late in 1959, councillors were encouraged to maximise coffee production in their areas. The Ongoho councillor (who is a half-brother of the ex-village constable)(1) was able to persuade some people to start harvesting again. On this occasion each family was to be allowed to harvest, process and sell whatever coffee its members picked.(2) People were to be allowed to pick anywhere and at any time. No maintenance was done except on one occasion at the beginning when all people worked together to clear the undergrowth. This system [578]

(1) When the council was formed all village constables were compulsorily retired. [625]

(2) The produce was still taken to Popondetta on foot. The Higaturu Council provided a tractor and trailer to collect coffee from various points along the main Saiho-Popondetta road, but Ongoho was about eight miles from the nearest point. As a flat rate of one penny per pound was charged for the service, the Ongoho people did not use it. They used to leave Ongoho at dusk and carry all night and arrive at the factory early the following morning. [489]

743 The Public Health Department maintains a large base hospital at Saiho, 5 miles from Sivepe. A vegetable market at Saiho, originally established to supply the hospital, now serves a wider range of customers and at present is open every Thursday and Saturday (E. Waddell: personal communication). A few Sivepe people in our sample sell vegetables there regularly but seldom buy anything except lime (for chewing with betel nut). There are well-stocked trade stores at Saiho and Awala and a Savings Bank agency at Awala. In 1963 a trade store was established near Sasembata, by a member of Kongahambo village.

177 We could not complete this introductory sketch of local facilities and conditions without noting the traumatic experiences of the mountain Orokaiva during the life-span of the older men. Even an abbreviated description of local attitudes towards introduced economic and social changes such as we attempt later, would be inadequate unless it alluded to the likely deep impact of the following events.

First, the early government patrols, which encountered widespread opposition from the Orokaiva, were attacked most persistently by the 'Wasida' people who include the Sivepe villagers. Fighting was fierce and many of the old men we talked to had seen close relatives killed or wounded.

Second, during World War II the paths of advance and retreat of Australian and Japanese troops crossed this area and the Orokaiva were 'drawn in as helpers, willingly or unwillingly, on both sides of the lines'.[1] Some Orokaiva groups also became involved in intertribal skirmishes at this time - during our stay an imminent military exercise occasioned apprehensions among some Orokaiva about a possible resumption of dormant intertribal conflict at the time of the exercise.

Scattered for safety in the bush while the wartime campaigns swept the area, many people in the neighbourhood of Sivepe died of malnutrition. In addition, there was very thorough recruiting of local men for subsequent phases of the war elsewhere in the Territory. In 1948 patrol staff reported that there was cause for concern in the continued decline in population.[2] At this

[1] Keesing 1951:8. For an account of this episode see McCarthy 1959: Ch. 4, 10 ff., see esp. pp.110, 126n and maps pp.123, 357.

[2] The war was said to have been a contributing factor; moreover, many villagers were employed as labourers on local European plantations and returned only at weekends; more important, the percentage of able-bodied males absent elsewhere as indentured labour had reached 31 and the officer accordingly recommended in 1948 that the area including Isoge, Isivita and Awala villages be closed to recruiting.

177 time the process of readjustment and restoration was still a
648 major question demanding attention. A few years later the third misfortune occurred.

731 The eruption of Mt Lamington, which caused catastrophic loss of life and dispossessed many people of their land,[1] left deep impressions on the minds of the survivors, particularly an acute sense of guilt which has been widely remarked upon. They felt that God had punished them for not helping the Allies enough during the war, and for not heeding the wishes of the mission and the administration. Some observers ascribed both the marked spirit of co-operation noticeable in evacuation camps and the avowed intentions of many to obey government directions in the future, to these negative feelings (Belshaw 1951:3-6; Keesing 1951:5). By this time 'population trends indicate that with the present percentage of children, there are likely to be considerable increases in the future' (Plant 1951:4). The area was closed for recruiting but this did not solve the problem of the supply of labour for reconstruction because men were drawn back to their casual jobs on local rubber plantations and the mission asked each village to work a day a week rebuilding mission stations (Belshaw 1951:8).

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657 After the war, compensation was paid for property of the
[731] villagers which had been damaged or destroyed, and following the eruption a programme of resettlement and rehabilitation was instituted.

121 For our investigations, Sivepe was chosen from the villages in
127 the Saiho Census Division mainly because it had been one of the sample villages in the Survey of Indigenous Agriculture conducted by government departments of the Territory and of Australia on behalf of the Food and Agriculture Organization's World Survey of Subsistence Agriculture. Information from the survey has provided quantitative material which, though summary, is directly comparable with results of our short survey of subsistence cultivation. The F.A.O. survey's sample was chosen by statistical methods.[2]

121 The interest which governed our own selection of a sample of
125 manageable size from among Sivepe villagers - and comparable with

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[1] Several thousand of the Orokaiva on the slopes of the volcano were killed by the clouds of hot dust emitted at about 200 m.p.h. and 200°C. Sivepe was just beyond the limits of the area destroyed. The villagers spent about a year's enforced absence in evacuation camps (see p.76), but some neighbouring people who survived were absent from their land for far longer periods.

[2] Walters 1963:4.

428 before establishing a household. The older brother should in time provide the other with an equitable share of the land.

There is no system of primogeniture in theory or practice.[1] In one case, however, a childless man, who was adopted into the local branch of Jegase clan and has also married a Jegase woman, either has bequeathed his land to the leader of his wife's lineage who allocated it to his second son, or he has himself bequeathed it specifically to the boy (who was given his wife's deceased brother's name). Most of the patrimonial land and some land held by the woman are to be inherited by the elder son.

241 Turning to the extent of landholding, the 12 households studied hold 138 acres near Sivepe or 2.7 acres per head, all of it arable with the exception of little more than 1 or 2 per cent.[2] Some members claim to retain land in relatively distant areas where they or their forefathers originally lived. In cases where the Sivepe people had not exercised their rights to cultivate these land claims, no estimate of their size was made.

b. The history of local settlement

177 The territory of the mountain Orokaiva was opened up when a new road from Buna to the Yodda Valley goldfields near Kokoda was built in 1904. In this part of Orokaiva country individual tribes were not as isolated as elsewhere. Although the various tribes were initially described as being constantly warring, and likely to attack government parties,[3] peace was secure within 4 years. [721] Intertribal feuds were effectively suppressed, except for an occasional raid prompted by the docility of neighbouring tribes under the novel conditions brought about by the arrival of the [166] Europeans. Many tribes, including the 'Wasida', were able to settle on their outlying lands which formerly they had not occupied for fear of raids.

●[464] Many of the people worked on the construction of the road, and later as carriers; by 1909 some had signed on for labour elsewhere

[184] [1] In this way, the mountain Orokaiva differ from at least one other Orokaiva tribe, the Yega at Beporo (R. Dakeyne: personal communication).

[162] [2] This density is the equivalent of 237 persons per square mile (cf. 300-500 per square mile for Southern Chimbu, Brown and Brookfield 1959:74). The Saiho Census Division, on the other hand, has only about 75 persons per square mile; however, as Map 2 indicates, it includes extensive areas of unoccupied and generally unused rainforest surrounding the concentration of populations with higher densities and separating them from their former enemies. Some of the land of the thousands of Kombu Sangara killed in 1951 also appears to fall inside the Saiho boundaries.

[3] See Territory of Papua 1903-4:39; ibid. 1904-5:14, 36.

[TEXT CONTINUED ON PAGE 41]

177 in Papua (Territory of Papua 1908-9:19). In 1904, 4 village
464 constables had been appointed from the peoples along the new road.
625 By 1908 members of the various tribes were peaceably trading with the carriers along the road (Territory of Papua 1907-8:22).

166 In about 50 years preceding the establishment of their present
361 village the groups now represented in Sivepe had between them
177 been involved in shifts of residence between a series of 14 village sites within an area of about 2 square miles adjoining the Sohu River. Informants claimed that they or their ancestors moved from 11 of these under instructions from government officers to amalgamate into larger units. During this period members of several other descent groups have either accompanied them or established independent villages and worked land of their own in [G21] the same area. Intermarriage among contemporary villages there was common and individuals frequently moved from one to join kin in another.

166 The 4 Jegase lineages can trace the history of their groups
361 back to a point of common origin in the first decade of the
613 century in the village of Simbehata and its 'satellite' Totogata, both on what is now Jegase land hardly a mile from the present site of Sivepe.[1]

(i) Migration 1900-50: The Bebehupa moved from Simbehata to Korogombata[2] and were joined by some members of Usohu living nearby.[3] Except for 3 families which moved out to form Kisisita, Aurija and Andakahambo villages, they remained there until about 1937 when they were asked by the Administration to reunite with these 3 to establish Korinasusu. One of the 2 major pre-war tracks from the coast to Kokoda lay nearby and when Japanese and Australian troops moved along this in 1942 the people abandoned the village and moved into isolated garden huts. Most villagers returned to Korinasusu after the war but 1 group founded Nahihita nearby.

[G57] In 1950 the Administration instructed the Bebehupa of Korinasusu and Nahihita to join the Usohu people living in Gogovosusu and Binduta to form one large village. Up to that time the villages had been confined to Jegase land but because

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[1] For place names mentioned in this section see Map.2. A

[2] Mentioned as a 'Jegase village' by Williams in 1923 (W.83), as are Sivepe, Pusahambo and Hanimkumbari (see pp.34-7). He also lists them as Awala villages.

[3] A number of the older Jegase men claimed that the Usohu people formerly regarded themselves as members of Jegase clan.

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5. Employment

Ten people who are siblings or sons of the householders in the 2 subclans are absent from the village. Eight are employed in other districts of Papua as clerks, policemen or technicians. Two men, a single man and a widower, have left to work elsewhere in the district.

Five of the 10 absentees are the youngest sons in their families but their absence does not seem to be directly attributable to a heavy demand on their families' land resources. These who have left the district are people who had the advantage of local education facilities which were not available formerly and they hold semi-skilled positions which offer more prospects of permanent employment than most of the present householders had.

[871]

Only 5 adults in the sample, 2 men and 3 women, have had any formal education. One of the men attended school for 4 years, the other for only 1 year. Five of the 7 householders in the 45-65 age group were employed outside the district on European plantations for 2-3 years before the war, 3 of them as rubber tappers. These men served a total of 7 years as carriers during the war. Apart from the years of service as a paid village official or local government councillor only 2 of them have taken work since the war - 6 months each as casual labourers on a plantation near Popondetta. The 2 other householders of this age have never had paid work. The men between 25 and 35 years have spent an average of 7 years in employment outside the village as against the older men's 3 years.

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The frequency and duration of the younger men's terms in employment are set out in Table 9.

Table 9

Years spent in employment

Household No.	From date of first employment until birth of first child			Since birth of first child		
	Total years	Years in employment	No. of jobs	Total years	Years in employment	No. of jobs
1. (e2J)	5	3.5	3	4	Nil	Nil
2. (d10J)	5	3	3	11	2.5	3*
3. (d11J)	13	9	4	No children**		
4. (e5T)	10	8	5	6	1	2
5. (e1T)	4	3	2	14	6	7

*Householder took further employment soon after our survey.
**Householder had child by first wife but lives elsewhere; he is still employed.

Table 10

Types of former employment of household heads

Age	Household	While resident of village				Within Northern District			In other districts			Total
		Cr or Vc*	Plantation	Unskilled**	Total	Plantation	Unskilled	Total	Plantation	Unskilled	Total	
50	1(d3J)	15			15	0.5	2***	2.5	2[#]	2***	4	21.5
26	2(e2J)			1	1		1	1		1.5	1.5	3.5
48	3(d12J)	6			6		2***	2	2***		2	10
60	4(d2J)											0
32	5(d10J)			3	3	0.5	1	1.5		1	1	5.5
50	6(d6J)								2[#]	2***	4	4
50	7(d4J)											0
32	8(d11J)		5[#]		5	1[#]		1	2[#]	1	3	9
34	9(e3T)		4	1	5	3[#]		3		1	1	9
55	10(d15T)						1	1	3[#]		3	4
35	11(e1T)			1	1	2.5[#]	1	3.5		4.5	4.5	9
55	12(d1T)					0.5		0.5	2***		2	2.5
		21	9	6	36	8	8	16	13	13	26	78

*Councillor (Local Government) or Village Constable.
**Excluding unskilled work on plantations.
***Pre-war or during war.
[#]Including work as rubber tappers.

474

464 The older men in the sample were restricted in employment
166 opportunities to indentured labour usually outside the Northern
[466] District. The young men on the other hand readily leave village life temporarily to take casual work on European plantations in the district where there is now a greater demand for labour. They may leave their wives and children to be provided for in the meantime by the other side of the family or may have them accompany them to the area where they are employed. These absences interrupt the routine of subsistence activities for the family but the possibility of this course of action is left open by local environmental conditions and the virtual independence of the nuclear family as a gardening unit. There is little seasonal variability and this small group is free to resume any phase of garden activities when and where it chooses.

431 Among the 5 able-bodied and active men of the senior group there seems to be no consistent demand for cash which cannot be met by gifts from their kin or affines and they have sought temporary employment only as a means of meeting some immediate financial requirements. With the exception of the salaried local government councillor the older men received 78 per cent of their total year's income of $88 as gifts.

434 By taking employment more frequently the younger men acquire
454 income which they gradually spend on the range of consumer goods available locally as well as on kinship obligations. However, not all income is spent in this way and, as Belshaw found in this area (1951:11) there is both some capital available for investment and a willingness to contribute money to funds for this purpose if they can be organized.

The men who have spent most years in paid employment also supplement their income by producing rubber and coffee, sometimes with the assistance of their fathers. However, no one has invested heavily in these crops and they provided only $52 or 15.8 per cent of the sample's income for the year.

245 c. Commercial agriculture

(1) Coffee. Four householders in the sample have individual coffee plots with a total of 503[1] trees on 1 acre of land. One of these plots is a section of a former village or 'company' coffee plot. About the time of the opening of the Higaturu Council in 1956 members of Jegase, Timumu and other groups in Sivepe and Binduta villages participated in the planting of 2 'company'

[1] The agricultural census of 1964 recorded 1,100 trees held by 5 growers in Sivepe as a whole (162 were not yet 6 years old and 491 of the trees had been planted more than 10 years before).

249 recent agricultural census listed 55 stands with 13,700 trees in
433 the Saiho Census Division (which coincides roughly with the 'Periho'
311 area) and another 3,700 trees in the Sangara Census Division. However, according to the 1964 census there were 14 Saiho villages with stands, carrying 10,000 rubber trees altogether, 4,500 of them less than 6 years old and another 3,500 less than 10 years old.[1] There were also 46 individually-held plots recorded with 8,000 trees, all less than 10 years old. The total number of rubber trees on village-stands in the Saiho, Sangara, and Togahau Census Division was put at almost 26,000.

249 b. The agreement between the lessee and the villagers was modified
657 in 2 ways after the war. When the scheme was resumed in 1943 the
[434] Administration decided that in order to facilitate the handling of money, the royalty to be paid to the owners should be changed from a percentage basis to a flat rate of a shilling twice a year per tree tapped;[2] and the royalties set aside every 12 months by the lessee were sometimes withheld by the District Office so that the people did not receive payment for more than 18 months, although the contract provided for half-yearly payments.

249 c. Until 1946 local villagers were employed by the lessee to tap
[464] their stands. A tapper would work in his own area but his task necessarily included some stands belonging to nearby villages other than his own. This caused some misunderstanding at first but the owner's suspicions were eventually allayed.

[625] The Village Constables had been responsible for seeing that
[623] the magistrate's instructions were obeyed when the plantations were established but apparently the Village Councillor in some cases assumed control over the distribution of the income among the 'owners', who were listed in 1 schedule of the agreement, although the money was shared under the supervision of a government official. One man recalled that 1 delayed payment of £114 was made for rubber from a number of stands owned by members of his village; he claims that the money was shared by more men than those named in the agreement drawn up several years before.

d. The lessee believes that the stage at which contract arrangements were conducted to the best effect and greatest satisfaction of the villagers was the period 1943-6 when he arranged to employ some of them as paid tappers.[3]

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1 These would include self-sown trees.

2 There is no evidence to support Belshaw's assertion (1951:13) that the owners were at one time receiving a royalty of only 6 pence per tree.

3 In September 1943 government officers reported that there was a good daily yield as the trees were in good condition.

replacement of his vehicle being necessary but uneconomic. By 1958 independent production from his own plantation was increasing and, despite periodic renewal of enthusiasm for rubber,[1] the number of village tapping stands had dwindled,[2] due partly, in the planter's view, to the movement of increasing numbers of able men from their villages to take paid employment. Already, in 1955, it had been noted that in the areas near Awala and Sangara there was a serious shortage of manpower for work in the villages due to the absence of men employed as wage-earners.

In 1958 the people still interested in tapping adopted the planter's plan that, instead of selling latex at 1 shilling per pound dry weight of rubber as before, they should coagulate their latex themselves and carry it to the factory for sale at 6 pence per pound of coagulum. However if members of a distant village had a lot of coagulum for sale, they might still ask the planter to send a vehicle to collect it without charge.

Bi-annual 'reports on native agriculture' put production from village stands for the year ending 30 June 1959 at 7,000 lb. (dry weight) and the price at 1 shilling per pound. In November of the same year it was estimated that rubber was produced from about 50 acres of village stands. By December another 2,750 lb. had been produced and the European planter suggested that declining production was due to the attraction of labour to the new Sangara European plantations and to heavy demands on villagers' time made by Administration departments and the mission. Coffee and cocoa planting was said to be increasing at the expense of interest in tapping rubber. In the first 6 months of 1960, however, 4,700 lb. (dry weight) was produced; by mid-1964 interest had increased further[3] and coagulum with an estimated dry rubber content of 1,500 lb. per year was being produced. In 1962 the price offered by the planter for coagulum had fallen from 6 pence to 5½ pence per pound.

It is not clear whether the individuals who offered themselves as tappers after 1946 had been conceded this or any other right by the rest of the villagers. Responsibility for distributing

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[1] In the first 6 months of 1955 production from 7 plots of rubber 'in the Sasembata area' rose by 60 per cent to 8,000 lb. dry weight (DS-29-855).

[2] The planter puts the number of villages involved at this time at about 30. The number participating at present is still about the same.

[3] Interest was aroused by the Ombisusu rubber project at this time (see p.102).

461 In 1944 attempts were made to revive the communal plantations but employment by the American military in the Inonda-Oro Bay area and other work for Allied troops made the people revise their ideas on the value of their labour[1] and resulted in a general lack of enthusiasm for the cash cropping schemes.

731 The eruption of Mt Lamington and the subsequent floods destroyed many villages and gardens and some 5,000 survivors had to be evacuated to refugee camps at Oro Bay and Ilimo. While the majority were resettled within four months, 1,500 people from within a 'danger area' of eight to twelve miles around the active crater were obliged to remain at Ilimo camp until July 1951, or live with clansmen elsewhere, and re-occupied their villages only over a period of years.[2]

731 Many Orokaiva viewed the disaster as divine punishment, in
823 particular for their lack of co-operation with governmental and mission programmes,[3] and they were reported to deeply appreciate the extensive relief measures, including food, tools and medical services, provided by the Administration. Subsequent Administration
464 reports remark on the willing co-operation of the people in voluntary road construction and their renewed interest in cash cropping.[4] However, once the need for producing food as a relief measure had passed, all staff of the Department of Agriculture were withdrawn from the District. Interest waned and was reported to be 'completely dead' in 1953.[5]

(d) Activities of the Anglican mission

797 Apart from very limited activity by Seventh Day Adventists in the Pongani area and Lutherans among highland labourers at Sangara, the Anglican church is the only mission working in the Popondetta sub-district. It first established itself at the Mambare River in 1900 and activities were gradually extended southward along the coast, but it was not until the 1930s that stations were established among the inland Orokaiva, at Isivita and Sangara. In 1965 the

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[1] Patrol Report, Higaturu, 1543/44; Crocombe 1964:21.

[2] See Rimoldi 1966:45-6 for a fuller description.

[3] Belshaw 1951b:242; Keesing 1952:18. However, some informants viewed it as punishing the Europeans (thirty-four of whom were killed) either for the hangings at Higaturu and Sangara, or for not having provided the Orokaiva with education and access to income.

[4] This was in part an expression of the high prices obtaining during the Korean War.

[5] DDA, Popondetta, D5-17-4-5.

considerable interest was shown, more than $14,000 being subscribed by the Orokaiva in the first six months of operation. However, it appeared during 1964 that this company might experience the same pattern of high initial interest and subsequent disenchantment, accentuated by the failure to pay a dividend at the end of the first year of operation.

Cocoa is purchased by both DASF and the Popondetta Cocoa Fermentary Ltd, a company financed entirely by European capital. Plans were being made in 1964 for the ex-servicemen settlers, both indigenous and expatriate, to establish their own fermentary.

Weekly markets at Popondetta and Saiho provide outlets for subsistence produce but turnover is small and it is doubtful whether they contribute significantly to many individual incomes.[1] The principal buyer at Saiho is the Public Health Department and at Popondetta, the urban indigenous wage labour force, but in both markets the volume of transactions between subsistence-oriented villagers (primarily involving lime, smoked fish, areca nuts and fresh meat) is increasing.

The Administration and the Anglican mission buy fresh foods brought to their stations. Since purchase prices were fixed by the Administration at 2c and the mission at 1c per lb,[2] and only a limited quantity is required, there is little incentive for the villager to increase production.

In spite of an increasing commitment to cash cropping, rates of planting and levels of production fluctuate with changing prices and difficulties in selling certain crops. The purchase price for coffee has ranged between 9c and 32c per lb over the period 1955-65 while that for latex has fallen from a peak of 55c per lb during the Korean War boom to 9c per lb in 1965. A Citrus Marketing Scheme elicited much local interest in 1956-57 when fruit was purchased at 5c per lb, but it collapsed with the unwillingness of retailers in Port Moresby to handle the produce.

(f) Conclusions

In spite of long participation in cash cropping, Orokaiva involvement is not high. Everywhere commercial production remains subsidiary to subsistence, individual cash crop holdings are almost

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[1] Dakeyne 1965:109; Rimoldi 1966:8. Both show, however, that a few individuals earn worthwhile sums from marketing.

[2] Bartered at this rate in salt, tobacco, razor blades and kerosene.

universally small and there is no evidence to suggest that any village producers are employing labour to increase production.[1]

Monetary investment at the village level is low and there are no motor vehicles owned by individuals or groups of subsistence villagers,[2] although a number of villages now possess copra driers and coffee pulping machines.

The foregoing data suggest three main factors, largely unique to the sub-district, which may explain this situation.

(i) Labour shortages. Since pacification there have been repeated references to a high proportion of the adult male labour force being absent from their villages. Humphries (1923:203) refers to the Kumusi district being a 'famous recruiting-ground for plantation labourers' at the time of the first world war. Patrol reports after the second world war make periodic references to shortages of manpower in the villages and suggest that the regulation maximum of 30 per cent absent was at times exceeded (e.g. Higaturu 1-1543/44). The establishment of plantations under the ex-servicemen's credit scheme attracted much local labour at a time when returns from wage labour were considerably higher than those from cash cropping. Many Orokaiva still prefer wage labour to commercial agriculture as a source of cash.

(ii) Consequences of the disasters. The effects of the war and the volcanic eruption served to accentuate the instability of settlement and fragmentation of groups. Resettlement after the eruption took several years in some cases and is likely to have deterred interest in planting commercial trees, at least in the directly affected area, which was the most densely settled part of the Orokaiva region. The findings quoted earlier[3] suggest that the initial Orokaiva adaption to the volcanic disaster was more active

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[1] Since our survey, one Inonda man has taken a job as a driver in Popondetta and employs a labourer at $3 per week to maintain his food gardens. For a description of four Orokaiva entrepreneurs with large holdings of cash crops see Crocombe 1967.

[2] With the single exception of the indigenous ex-servicemen settlers, several of whom own vehicles; imported foodstuffs comprise a significant element of their diet and considerable use is made of outside labour, commonly kinsmen. Payment, however, is often nominal or in kind.

[3] See p.16.

A,[See Category 731, p.16--Analyst]

are supplied by villages within two or three miles of the township whereas the meat and fish may come from much further afield, since their weight/value ratios are much higher than for vegetables. One pound of pigmeat sells for 10c - the price of four taros averaging eight pounds weight. Prices in the markets are standardised and not dependent on supply or demand. Those who sell meat or fish can earn worthwhile sums, since a wallaby may fetch $4 but, in general, marketing is a significant source of income only for people from the less densely-settled areas or the coast where fish or wild game are plentiful.

(iii) Wage employment. Several categories of wage employment are available to villagers from time to time. The construction of new all-weather roads within the sub-district has recently increased the opportunities for temporary employment as unskilled labour.[1]

The Administration frequently makes contracts for the supply of timber or the erection of buildings from local materials and both Sivepe and Inonda profited by these during the survey period. The contract may be made with an individual, who pays the others from the proceeds, or a group.

There are some opportunities for casual employment on plantations, but most planters prefer to employ workers from outside the Orokaiva area because they are less likely to be simultaneously involved in subsistence tasks and traditional obligations. Moreover, such work is not popular with the Orokaiva, who prefer to work for relatives holding blocks under the ex-servicemen's settlement scheme at Sangara, Isavene or Girua. Individuals or whole families may stay with relatives or friends in this way, sometimes for several months. No formal agreement is entered into and the villagers may work only intermittently, in return for their keep and, at the end, a sum of money and additional payment in kind (tinned meat, rice, sugar, etc.). In some cases, however, regular payment is made at the official casual rate of $3 a week. Work of this kind is popular and during the survey there was almost always at least one person temporarily absent from Sivepe visiting or working for settlers. At Inonda, it was possible to work for settlers on the Girua blocks while resident in the village.

Anglican mission stations frequently employ school-leavers as 'medical orderlies' and 'nurses' in their clinics and hospitals. Standard IV or V education is required but the salary is normally only $1 a month and few adults are involved.

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[1] This applied to villages between Popondetta and Inonda when the road to Oro Bay was improved in 1963-64, and in 1964 work began on the realignment and improvement of the Popondetta-Kokoda road, which passes through Saiho census division within three miles of Sivepe.

491 station with Boru on the main road near Awala and passing within a
[499] mile of Sivepe, but it was not completed by the onset of the wet
season. It was intended that this would be used by the OCCS and
[361] other purchasers of produce. This was the main reason for the
Sivepe people's decision to move their village to a site within
200 yards of Sasembata mission station.

797 Sasembata mission is a head station of the Anglican mission.
[743] Among its facilities are a church, administered by an Orokaiva
priest, a hospital and infant welfare clinic run by a Papuan
[871] medical orderly but supervised from the Administration hospital
at Saiho, and a primary school with 400 children on the roll.[1]
The school includes classes up to Standard V and is headed by an
Australian with the assistance of ten Papuan teachers. A small
trade store is operated by Oro Ltd at Kongohambo village adjoining
the mission station.

621 Sivepe itself is laid out as a line village, with lineage
members tending to occupy adjoining houses (see Map 4). The houses
[342] have a mean size of 229 sq ft and are built entirely of local
materials, with the exception of nails which are now commonly used.

[125] Three clan branches are represented in the village and two of
these, the Jegase and Timumu clans,[2] comprised the survey sample
(55.3 per cent of the total village population of 114 in January
1964), the characteristics of which reveal them to be representative
of the population as a whole.[3]

166 The population of the sample declined by 20.6 per cent, from 63
to 50 persons, over the survey period. Ten of the 17 departures
464 migrated to other villages and the rest sought wage employment
within the district or in Port Moresby. This continuing out-
migration intensified certain characteristics of the village's
labour force, for by January 1965, 37.8 per cent of the potential
adult male labour force was absent, the majority on a long-term
basis in unskilled or semi-skilled work or low-ranking positions
in government service.[4] In three cases, wives and children remained
in the village and were supported by close kin. In January 1965,
there were only two men remaining in the 20 to 34 years age groups.

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[1] An estimated 80 per cent of the children in the area receive some schooling.

[361] [2] Clansmen also reside in twelve other villages, all within a radius of 3.7 miles of Sivepe.

[3] See Appendix 1 A and Fig. 4:1. B

[4] See Appendix 2. C

A, [See Category 163, p. 307--Analyst] B, [See Category 162, p. 39--Analyst]

C, [See Category 166, p. 308--Analyst]

592 The average size of households[1] is 4.5 persons, otherwise expressed as 2.4 labour units.[2] Of the fifteen households in the sample at the beginning of the survey, only four had individual [249] holdings of cash crops and one man started a holding during the survey (coffee in all cases). Everybody had rights of access to a communal rubber plantation which was tapped by individuals on a rota system.

464 Most household heads have worked for wages as unskilled or semi-skilled labour (plantation workers, rubber tappers, domestic servants and labourers for the Australasian Petroleum Company). 871 The highest level of education reached by any householder was standard II.[3] Standard IV is the highest level attained within the sample (including children), although one absentee completed standard VI at a government school at Kokoda.

622 Although the sample includes the local government councillor for Sivepe and the adjoining villages of Binduta and Awala, he only recently arrived in the village and exerts limited authority.[4] [241] The village as a whole possesses no universally accepted spokesman or leader[5] and the repeated failure of communal ventures[6] may be related to this fact.

Economic holdings

433 Within the subsistence sector, a key factor in the pattern of exchanges is the fluctuating resources of particular foodstuffs in production at a given time in a given household: when an individual has no producing taro he is dependent on others, when he has excess he distributes. Significantly, at the time of the survey of

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[594] [1] For the purposes of this survey, a household is a group of people gardening, cooking, eating and budgeting together. It is basically the nuclear family, perhaps including unmarried kin or widowed or divorced parents (although these may operate as independent households). The household invariably resides under a single roof. Cases of two households living together occur and their frequency in Inonda helps explain the larger mean size of house.

[128] [2] Labour units were calculated on the following basis:

Age	5-9 years	10-14	15-19	20-44	45+
Male	0.1	0.3	0.8	1.0	0.8
Female	0.2	0.4	0.7	0.8	0.6

[3] See Appendix 1.4 [4] See Rimoldi 1966:55-6.

[554] [5] One man, adopted into Timumu clan, is asserting himself increasingly through his generosity, organising ability and industriousness.

[6] See pp.44-5 and Rimoldi 1966:84, 107-8.

A. [See Category 871, p. 307--Analyst]

8: Waddell & Krinks E-4,5 (1964-1965) 1968 QJ23 Orokaiva QJ23

121 subsistence societies those activities which provide the mechanism for exchange are generally excluded since it is assumed that the exchanges are of little economic significance. As will be demonstrated such an assumption is of doubtful validity.

In societies where labour is not specialised and subsistence production dominates, the social and economic threads are closely interwoven. All actions may be considered economic in that they are concerned with the 'maximisation of satisfactions',[1] while the close association of the networks of kin with processes of production, distribution and consumption precludes the drawing of a clear distinction between work and leisure. While the term productive is a useful parameter as applied particularly to material life and in contrasting the nature of the involvement in the subsistence and external sectors of the economy, it comprises only part of the total economy. Production and labour in traditional societies must be considered as an integral part of this broader system, perhaps following Conklin (1957:152) who stresses that Hanunóo 'mixed swidden farming...constitutes a pattern for living rather than only a means of making a living or a source of food or cash income'.

There is a complexity of motives underlying the various activities and to suggest that work is oriented simply towards obtaining material goods and achieving subsistence is to grossly misrepresent the situation. 'The pleasure of craftsmanship, the feeling of emulation, the desire for public approval, the sense of duty towards the community, and the wish to conform to custom and tradition, all these and more find outcome in economic action.' (Firth 1959:175.) The point is not simply one of theoretical significance[2] but is of considerable relevance to a consideration of the development potential in these communities, and it is with this in mind that attention here is directed to the whole range of village activities.

179 433 The IBRD report on 'The Economic Development of Papua and New Guinea' considers efforts should be directed primarily to the exploitation of the two major resources of land and labour, and states (1965:40) that

[464] The mobilization of unskilled indigenous labour for development should not be difficult; the manpower potential is large and there is evidence that many more workers could be recruited for wage employment than are now at work.

121 464 The thesis that a potential surplus of labour is concealed within the New Guinea subsistence economy has been developed by Fisk. While the data which follows vindicates his main argument, two

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[1] See Burling 1962.

[2] For a detailed discussion of this see Steiner 1957.

assumptions on which the thesis is based warrant discussion at this stage. These are, one, that in the 'pure subsistence unit'

> What they produce is either consumed by themselves or goes to waste. Saving is limited to the storage of such necessities as can be stored as a reserve against a rainy day, a poor harvest or sickness, and to occasional preparation for increased consumption in feasts and ceremonial. Beyond that there is no incentive to save, or to produce at a level beyond their normal immediate consumption. The level of production is therefore subject to a very definite ceiling, which may be well below their potential capacity to produce, in that when they have produced sufficient of what they know how to produce to meet their immediate needs, there is no point in producing more. The production of a surplus beyond that requirement adds nothing to their satisfactions, present or future. (Fisk 1962:463)

and, two, that 'economic and ceremonial activity are distinct and separate':

> Ceremonial activity and the preparations therefor we shall treat in the category of leisure activity, and as affecting economic activity only to the extent that certain amounts of leisure activity are socially regarded as necessary, and that the amounts of labour available for economic activities are socially limited thereby. (Fisk 1962:464)

Power and prestige in New Guinea are dependent largely upon the control of goods and services. There is, ideally, no limit to the number of wives, pigs and gardens a man may have, and the more he has the greater the productive capacity of his particular subsistence unit. As his level of production increases, that part which is distributed as opposed to consumed increases disproportionately, and so the range and degree to which others are indebted to him increases. Not only does this serve to elevate his status but it provides him with considerable security in times of stress and when making further investments. Insofar as the distributive system itself is concerned, ceremonial activities (although emphasised in the anthropological literature) may be less significant and time-consuming than informal gift-giving; although the principle of reciprocation is at the basis of both, specific goods and services do have exchange values so that they do not necessarily operate on a like-for-like basis. Thus the pattern tends towards a powerful (wealthy) individual distributing goods (foodstuffs) and being reciprocated with services (labour). This has the effect of increasing his capacity to produce and so further elevating his status. Political, social and economic behaviour are therefore inextricably connected and 'leisure' activities cannot be considered apart from the economic system. An example from the Orokaiva will serve to demonstrate the point.

Chapter 6

Activity patterns: Sivepe

125

Introduction

[128]

The Sivepe survey involved 35 adults (17 men and 18 women). Of these, 23 were resident in the village throughout, the remainder either commencing or terminating their residence during the survey period. In all, a total of 5,310 man-days was covered although, on account of temporary absences and sickness, detailed records were only kept for a shorter period. Of the total available labour time 6 per cent (320 man-days) was lost through absences longer than 24 hours and a further 4 per cent (212.4 man-days) through sickness within the village. However, during a single week in period I, at the height of an influenza epidemic, 29.6 per cent of potential labour time was unavailable (see Fig.6:1).

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(a) Temporary absences

A total of 453 man-nights was spent away from the village, or 8.5 per cent of all covered by the survey.[1] An analysis of reasons for absence is presented in Table 6:1. The major single cause, 36 per cent of the total, is visits to ex-servicemen settlers at Sangara, mostly by kinsmen[2] to assist in establishing the block. A further 26 per cent of absences involved garden work, either protecting the gardens from incursions by pigs, or facilitating intensive clearing programmes.

While the fulfilling of social obligations accounts for only 16 per cent of all absences, it involves the largest number of people (24 of a possible 35, compared with 13 for garden work and 5 at Sangara) and is characteristically of short duration, seldom more than one or two nights away from the village. By contrast, the

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[1] The difference between this and the figure of 6 per cent for man-days quoted above being that some of the nights involved absences of less than 24 hours duration.

[2] A daughter of one of the sample is married to a settler while a Jegase man from a neighbouring village also has a block at Sangara.

[TEXT CONTINUED ON PAGE 77]

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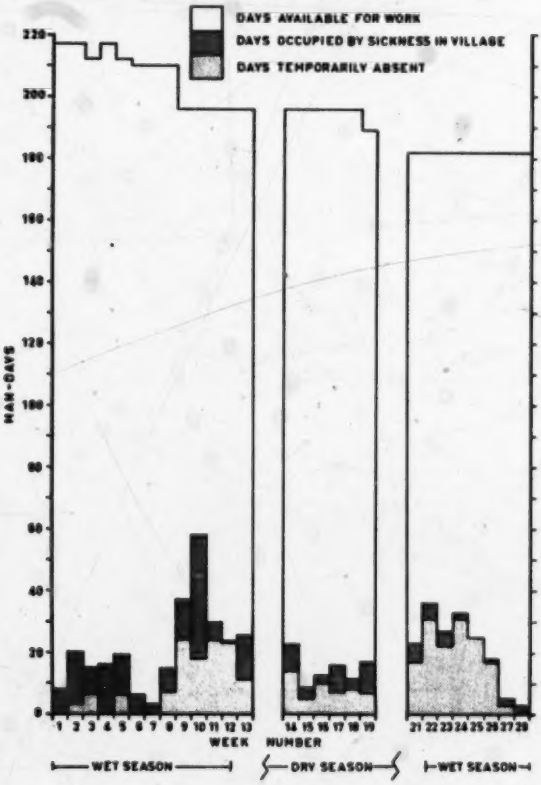
SIVEPE FIGURE 8:1

POTENTIAL WORKING DAYS AND DAYS OCCUPIED BY ABSENCE AND SICKNESS



mean duration of absences at Sangara is 26.7 nights. In the case of such long absences only one member of the household is normally involved so that the routine of gardening activities is not greatly disrupted. 166

As Fig.6.1 demonstrates, some periodic variation is discernible in the pattern of absences. During the first seven weeks of period I absences occurred on only 1.7 per cent of survey nights, but for the rest of the survey a substantially higher percentage was maintained. These first weeks largely coincided with an (abortive) attempt to establish a communal cash crop garden in the village.[1]

The proportion of absences rose to 10.1 per cent during the last six weeks of period I, falling slightly to 7.4 per cent during period II, the main cash cropping season, and rising to a peak of 15 per cent in period III. During this last period over half (59 per cent) involved visits to Sangara.

In analysing absences according to sex, age and cash cropping status some meaningful patterns emerge (see Table 6:2). Men tend to absent themselves more than women, largely on account of their greater dealings with the external agencies (17 per cent of all their absences). [562]

The 25-34 years old age group is distinguished by its very low incidence of absences - less than 2 per cent of survey nights compared with over 10 per cent for all other age groups. Virtually all absences in this age group were connected with social obligations or garden work; no visits were made to Sangara. The mobility of this age group may be influenced by the fact that it comprises young married people with families.

Cash croppers absent themselves less than non-cash croppers, while almost 42 per cent of the former's absences is connected with subsistence garden work and only 6 per cent involved visits to Sangara. By contrast non-cash croppers are not only absent more frequently but spent 55 per cent of all nights absent at Sangara. Since assistance to settlers is normally reciprocated with cash payments or trade store goods (usually food), evidently those with no reliable avenue for acquiring cash within the village context perceive assisting kinsmen on the land settlement scheme as an important alternative source. [434]

(b) Sickness

While sickness and the care of sick people account for a minority of absences from the village, they did result in 212.4 man-days being spent totally inactive within the village and a further 615 464 734 164

[1] See pp.44-5. 1

[TEXT CONTINUED ON PAGE 77]

man-hours were absorbed by clinic visits and related public health activities. So, grouping all three categories together, sickness accounts for almost 7 per cent of potential activity time.

In analysing the 212.4 man-days spent inactive, Fig.6:1 indicates that 26 per cent fell during two weeks in period I when an influenza epidemic swept the area. It is during the latter part of the wet season that sickness reaches its most serious proportions, accounting for 7 per cent of potential activity time. Malaria, being endemic, is the most common cause along with other parasitic diseases of a debilitating nature; hence the seasonal pattern.

Table 6:3

Sivepe: incidence of sickness according to sex, age and cash cropping status

	Sex		Age				Cash cropping status	
	M	F	15-24	25-34	35-44	45+	Yes	No
Percentage of days sick to total survey days	5.1	4.2	2.3	2.0	1.5	8.3	1.8	8.8

Table 6:3 shows that the older people suffer most and also that non-cash croppers spend a significantly higher proportion of their time sick than cash croppers. While this is largely because the heads of non-cash cropping households are, on average, older than the others[1] it may well be that the non-cash croppers, lacking the initiative of the others, more readily assume the sick role.

Temporary absences apart, 4,990 man-days were spent in Sivepe, and during this time the villagers' activities occupied 28,975 hours, or 5.8 hours per man-day. Furthermore, virtually all these activities, except hunting, certain social activities and, occasionally, house construction, were confined to the daylight hours.

Patterns of activity and seasonal influences

The adult residents of Sivepe are active, on average, 40.6 hours per man-week, although, as Fig.6:2 demonstrates, there is a substantial variation from week to week. The actual range during the observed period was 34.4 to 51.3 man-hours.

[1] Of the 11 households resident throughout the survey the heads of the non-cash cropping ones are all in the 45+ age bracket while only 2 of the 7 cash cropping ones are.

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Table 6:4

Sivopi: mean time spent per man-week on all activities in each recording period
(hours per man-week)

Group	Activity		Period I	Period II	Period III	Survey
Clearing			4.4	2.4	3.3	3.7
Subsistence gardening	Fencing		-	-	0.2	<0.1
	Taro	- plant	1.9	2.8	3.0	2.4
		- maintain	3.0	3.9	4.5	3.6
		harvest	3.4	1.9	3.0	3.0
		market	0.1	-	-	0.1
	Sweet potato	- plant	-	-	<0.1	-
		harvest	0.7	1.1	2.4	1.3
		market	0.1	-	-	<0.1
	Yam	- plant	0.6	-	-	0.3
		maintain	-	-	0.2	<0.1
		harvest	0.8	0.1	0.6	0.6
	Minor crops	- plant	-	0.1	<0.1	<0.1
		maintain	-	-	0.1	-
		harvest	1.0	3.4	1.1	1.5
		market	<0.1	-	0.2	<0.1
	Total		11.6	13.5	15.6	13.2
Other subsistence food production	Fishing		0.2	-	0.5	0.2
	Hunting		0.7	0.8	4.8	1.8
	Bags-making		-	1.3	0.4	0.4
	Total		1.0	2.3	5.7	2.5
Other subsistence activities	Preparation of tools and equipment		0.3	-	0.3	0.3
	Construction		2.2	1.6	0.6	1.4
	Total		2.5	1.6	1.1	1.7
Household	Washing		<0.1	0.2	0.3	0.2
	Cooking		4.8	4.6	5.1	4.8
	Collecting firewood		0.2	0.1	0.3	0.2
	Total		5.1	4.9	5.7	5.2
Social obligations	Marriage		-	0.2	-	-
	Death		1.7	0.9	0.2	1.1
	Other		0.8	0.7	1.7	1.0
	Visiting		1.3	1.0	1.3	1.2
	Total		3.8	2.8	3.2	3.3
Cash cropping	Coffee	- maintain	0.2	-	-	0.1
		harvest	0.9	0.2	-	0.5
		process	1.0	0.3	-	0.6
		market	-	0.5	-	0.1
	Rubber	- harvest	0.1	<0.1	0.5	0.2
		market	-	-	0.1	-
	Total		2.2	1.1	0.7	1.4
Paid work			2.0	1.2	1.0	1.6
Sick	Personal		0.5	0.2	1.2	0.6
	Care of sick		0.3	0.2	0.2	0.2
	Total		0.8	0.4	1.4	0.8
External agencies	Purchasing		0.2	0.4	0.7	0.4
	Council work		0.9	1.8	1.0	1.2
	Meetings		1.3	0.5	1.8	1.3
	Church work		0.3	0.3	0.1	0.2
	Church services		3.1	3.7	1.2	2.7
	Total		5.9	6.7	4.8	5.8
Miscellaneous	Recreation		0.1	0.4	0.4	0.3
	Other		0.1	-	1.1	0.4
	Researchers		0.3	-	0.2	0.2
	Total		0.4	0.3	1.7	0.8
Total - all groups			40.0	37.5	44.2	40.6

245 [442] Coffee must be carried to Awala for sale, about one hour's walk away. Since assistance is often required, marketing becomes a significant component of the total time devoted to coffee production. It is complicated by delays over the arrival of the buying vehicle at Awala, shortage of cash to make immediate payments, and inadequate transport capacity; growers are periodically involved in [484] two or three journeys for the sale of a single load of coffee. Outside the buying season no attention is given to the gardens nor are any ripe berries harvested.

249 While in theory rubber trees undergo a 'wintering' period of about three months (August to October), the communal planting is tapped on a rotational basis throughout the year by seven villagers, including three members of the sample. Table 6:4 shows a peak in activity during period III but this probably reflects the tapping order rather than other considerations and in fact two of the sample households tapped during this period. It cannot be considered as a diversion of activity from coffee to rubber since the two households in question did not exploit any coffee during the year. Marketing of rubber is less time-consuming than coffee as the factory at Awala accepts coagulum at all times.

461 During period I an additional 1.0 hour per man-week was devoted to the communal cash crop garden venture, of which 0.8 hours involved removing regrowth which had occupied the area following initial clearance in 1963.[1] In the balance of the time a few cocoa and rubber seedlings were planted and weeded.

Twenty-four of a possible 32 adults participated in the communal garden, although 68 per cent of the total time expended was provided by 11 individuals from four households. The scheme was characterised by intensive activity during week 1, when 7.3 hours per man-week were expended, falling off rapidly to complete cessation within eight weeks.[2]

464 (ii) Paid work. If the abortive communal venture is disregarded, the village residents devote as much time to paid work as to cash cropping. However, only five individuals were involved in such work, three men erecting buildings under contract to the hospital at Saiho and two young people doing medical work at Sasembata mission clinic.

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[1] This venture thus largely accounts for the increased time spent in clearing during period I. See p.81.

[2] The initial display of enthusiasm may have been influenced by the recency of the researcher's arrival in the village, when the exact nature of his relationship with the other external agencies had not yet been determined.

461 Although returns to labour from paid work are substantially less
[464] than from cash cropping,[1] medical work is popular among young people because of their participation in a group with common interests, while contract work, being more casual than most forms of paid work, enables most village activities to be pursued concurrently with it. An important consideration for the married person is that such work can be done while continuing to reside with one's family in the village.

512 (iii) Other activities. Of activities associated with the ex-
177 ternal sector of the economy, it is the 'non-productive' which are
[797] the most time-consuming: 5.8 hours per man-week are devoted to the external agencies, 3.0 of them to the church. The proximity of Sivepe to an Anglican mission head station run by an expatriate largely accounts for this as church activities tend to be more highly organised and frequent than on an out-station, so much so that during the Easter church festival, 13.1 hours per man-week were absorbed by services (week 8). Similarly labour requirements, in terms of voluntary assistance in erecting and maintaining buildings, are far greater at a head station.

Church activities reached a peak during period II with the Feast of St Mary Magdelene, the visit of a bishop, and the reconstruction of school classrooms. During period III a marked decline was registered, largely due to the general resentment of the villagers at what they considered to be excessive demands placed on their time during the preceding dry season. It was felt these demands had conflicted with major village activities such as cash cropping and the increased urgency of the food quest at that time.

[797] Formal gatherings or meetings are a recurrent aspect of village life. Of the 1.3 hours per man-week spent at them, 42 per cent is in connection with the Administration - at census takings, court cases, etc. - and a further 26 per cent with women's organisations - the Administration-sponsored women's club and the mothers' union run by the Anglican mission. The balance of the time is divided between political, OCGS and Oro Ltd meetings and disputes within the village.

[466] The local government council dictates that one day per week be
[651] spent on road maintenance and upkeep of the village area. It also requires that all adults present themselves, annually, for tax payments and that all births and deaths are registered. Altogether this council work amounts to 1.2 hours per man-week.

[432] While Sivepe is close to a number of trade stores, the people's limited requirements from them results in little time (0.4 hours per man-week) being spent in the purchase of goods.

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[1] For a detailed analysis of comparative returns to labour see pp.290, 292.

and two walked over the Owen Stanleys to Port Moresby in search of work. Two of the remaining three are still at school at Sasembata, leaving only Rodney Gill at home. The fact that he has not already left probably reflects some latent sense of obligation towards his parents.

After completing standard 4 at Sasembata, Rodney Gill went to stay with his married sister near Port Moresby for several months but he has never been employed outside the village. Nevertheless, he is frequently away for several weeks at a time, particularly at Sangara. Even during the survey period he was absent on 17.9 per cent of potential survey days, or 34 days in all. During 32 of these he was on an unbroken visit to Sangara assisting a settler construct a house, for which he received $6 and his keep.

Two months after returning to Sivepe he obtained work at Sasembata mission station, helping to erect new class-rooms for a salary of 80c per month. Disillusioned by the small wage he left after three months; nevertheless this work was the most important category in his total activity pattern. Since his parents have no cash crops and Rodney Gill has made no attempt to establish his own, the little cash cropping he does, 0.4 hours per week, is confined to assisting his brother Cecil King with his coffee.

Rodney Gill spends only 32 per cent of his time on productive subsistence tasks, compared with the sample mean of 65 per cent, and his contribution to subsistence gardening is particularly slight. Like other youths, he prefers to spend his time hunting and fishing, and for him other subsistence food production is the main subsistence activity. During the survey Rodney Gill rebuilt, almost single-handed, the single men's house in which he sleeps and also gave Cecil considerable assistance in rebuilding his house.

In general the productive tasks available in the village which appeal most to young men are those which occur irregularly or which can be done on impulse, have an important recreational aspect and have associated with them obvious shows of skill or strength. Their most popular leisure pursuits are parties and dancing to guitars. Rodney Gill spends more time fulfilling social obligations than any of the other individuals considered - 6.9 hours a week - yet 75 per cent of this was attending parties. Although most youths seldom have much money to spend on food and alcohol at these gatherings, the guitar music, singing and dancing pursued unrelentingly through the night appeal to them. Modelled as they are on expatriate festivities, and given an element of inter-village rivalry with

Chapter 7

Activity patterns: Inonda

Introduction

Records were kept of the daily activities of the 19 permanent adult residents of Inonda and of 2 young people (one aged 15 and the other 16) who spent periods of a few weeks in the village helping kinsmen. These 21 people were regarded as residents for a total of 3,230 man-days. Temporary absences of more than 24 hours duration amounted to 560 man-days and so the number of man-days considered below amounts to 2,670. Table 7:1 shows the number of man-days absent in each recording period and in total.

The number of effective working days in the village is further reduced by sickness. When suffering from major illnesses such as malaria and influenza, people generally stay in bed at home or at the aid post. Comparatively minor ailments such as skin infections, tropical ulcers and cuts are usually dealt with by brief visits to the aid post, mostly early in the morning before work. Such visits occupied almost 600 man-hours over the survey.

Table 7:2 shows the incidence of sickness when people were inactive in the village. Periods of sickness spent at the aid post or hospital are included under 'Absences' in Table 7:1.

Figure 7:1 illustrates the weekly incidence of man-days occupied by sickness while in the village and by absence. There are wide fluctuations in the incidence of both, but particularly the latter, which ranges from zero to 46 man-days. The peaks of absences occur mainly with feasts in distant villages and when several villagers are sick at the same time and stay at the aid post or with relatives. Sickness tends to be most common during the wet season (periods I and III).

During the 2,670 man-days resident in the village, the activities carried out by the sample occupied 16,620 hours or 6.2 hours per person per day.

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Table 7:2

Inonda: man-days occupied by sickness while in village

	Personal sickness	Care of sick	Total
Period I	61.5	2	63.5
Period II	22	6.5	28.5
Period III	43.2	3.5	46.7
Total	126.7	12	138.7

INONDA FIGURE 7:1

POTENTIAL WORKING DAYS AND DAYS OCCUPIED BY ABSENCE AND SICKNESS

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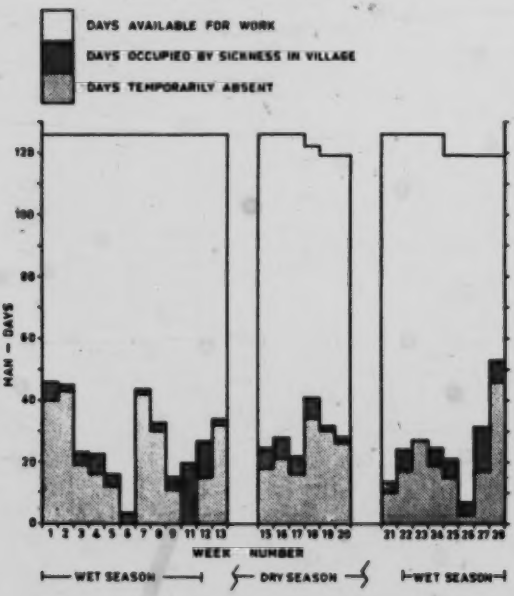

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Table 7:4

Inonda: adjusted mean weekly activity over survey period
(Adjusted with additional data on household tasks)

Mean number of man-weeks	Hours per man-week	
	Household	Total
14.7	10.1	49.9

(b) The external sector

In total, subsistence activities (including household tasks as adjusted above and excluding construction oriented towards cash income, occupy 34.8 hours per person per week. Cash-producing activities - cash cropping, paid employment, entrepreneurial activities, marketing of game and construction of the copra-drier - together occupy 4.5 hours per person per week. Unlike most of the subsistence activities, not everyone engages in cash-producing activities. Some men did not obtain paid work during the survey period and there is only one man with the experience and confidence to operate as an entrepreneur. Women may assist husbands and kin in cash cropping and sell produce in the market on their own account but they do not engage in paid work (though some had, in the past, worked as domestic servants on a nearby plantation). However, taking the village data as a whole, an individual spends an average of 39.3 hours a week on productive activities in both the subsistence and the monetary sectors.

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(i) Cash cropping. The average time devoted to cash cropping is only 1.0 hours per man-week. Although the survey excluded much of the coffee harvesting and selling season, the figure would be only a little higher if these had been incorporated. Only one household harvested and processed coffee during the survey; if the other two households with mature trees had also done so at the same rate, the overall average time on cash cropping would be raised to 1.4 hours per man-week. The most intensive work was carried out on copra in the dry season, when harvesting and processing occupied a mean 1.3 hours per man-week over that period. Unfortunately, much of this time was wasted. When the drier was finished, it was decided that copra-making should be a communal project and the villagers spent a total of 82.6 hours, most of this in three days, collecting and splitting some 410 coconuts, laying out the flesh and maintaining a fire. On the fifth day, the fire was stoked with husks instead of wood and shells and the copra was spoiled by the thick smoke. The following week the women refused to assist the men for more than a few minutes, since their previous labour had been wasted. The men spent 10.8 hours harvesting more coconuts and assistance from the researchers saved them 1 hour in transporting

512 entirely mourning and funeral feasts. The bulk of the time is
574 evenly divided between more or less formal social occasions and visits to kin and friends. The formal occasions include traditional feasts to mark the end of a dispute, to distribute the first fruits of a garden planted with the help of others, to mark the birth of a first child and to give or receive returns for [521] feasts held previously. They also include non-traditional celebra- [796] tions such as parties to mark birthdays, the opening of a new school and the saint's day of the local church. Such occasions usually occupy at least half a day and continue until midnight or dawn, whereas visits, as recorded here, are generally of only a few hours' duration. Visits may be made simply to see a friend or kinsman or they may be specifically to make or receive a gift, to return a borrowed article such as a gun, lamp or sago-beater or to discuss matters of common concern such as a projected feast. Visits occurred more during periods II and III but feasts and other formal occasions occupied more time during the latter part of the wet season, when they amounted to 3.1 hours per person per week compared with 0.3 hours per week in the dry and 1.9 hours per week at the beginning of the wet.

464 Among other activities, the most frequent include seeking employment in Popondetta, journeys impeded by flooded streams or rain and meeting kin or friends returning from visits. The time devoted to them varies greatly from week to week. For instance, after the road-building work near the village ceased early in 1964, little time was spent in gambling or seeking paid work.

164 The time shown in Table 7:3 as occupied by sickness represents visits to the aid post for personal sickness, care of the sick and attendance at the fortnightly infant welfare clinic.[1] As noted, the incidence of sickness tends to be greater during wet weather when malaria and epidemics of influenza may occur.[2]

512 Individuals devote a total of 10.5 hours per week to non-productive
[433] activities. However, the distinction between these and the produc-
[574] tive activities is not clear cut. For instance, part of the labour
[43] input in gardening may be designed to ensure a surplus of certain foodstuffs to meet specific social obligations. Similarly, visits to a kinsman may be undertaken in order to organise production and other aspects of a future feast, to assist in time of need or to make or receive a gift of food.

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[1] In addition to this time, individuals were inactive through sickness for an average of half a day a week (see Tables 7:1 and 7:2).

[2] During 1964 there were two influenza epidemics, in April and December.

branches and to drive the fish into the nets. On both occasions during the survey over twenty people were involved. Operations such as these are initiated by the older men. Participation is voluntary and seems to be based on residence as much as kinship.

Construction of houses generally involves some collaboration in erecting the timber frame and in preparing roofing sheets from sago-palm leaves, but much of the construction is carried out by the houseowner alone. When assistance is received, it may be from a wide range of kin, including agnates, matrilateral kin and affines. The main reason for the size of work group shown as involved in construction at Inonda is the erection of the copra-drier when all the men in the village collaborated.

It is worthy of note that, except for fishing and sago-making, all activities involving larger work groups are non-traditional activities directly associated with the monetary sector. The largest work groups occur in copra-making and the next largest in cultivation of coffee. As described above, copra-making was initiated by the entrepreneur as his own project but subsequently others combined to make it a village project. Cultivation of coffee is carried out usually by members of the household that owns a garden, sometimes assisted by other kin who have no cash crops or by young unmarried men. There is, then, a clear differentiation between traditional and post-contact activities in terms of the organisation of work groups.

The activity patterns of selected individuals (see Table 7:16)

Iemba. This man is unmarried, aged 21 and lives in the household of his elder brother. He reached standard V at Ururu mission school and began training as an aid post orderly at Saiho hospital, but left after eleven months, feeling that his current conditions and future prospects were not satisfactory. He then lived for some months with a relative of the same lineage at Ijika, returning to Inonda for several weeks during periods I and II and remaining permanently from late August onwards. In total, Iemba was absent for 86 days, 92 per cent of which were on visits either to his lineage brother or, for shorter periods, to other relatives. For 3 of the remaining 7 days he was sick and stayed at Hahema village, 2 days were spent at a feast, 1 at a party and 1 looking for work at Popondetta.

Iemba's observed activity patterns seem fairly representative of the behaviour of young unmarried men in the area. Probably his attitudes are also quite widely shared: although he frequently helps his brother and other kin in Inonda and other villages in subsistence tasks and cash cropping and will almost certainly settle in the village when he marries,

166 he expresses at present a preference for paid work and spent over 27 hours, in addition to
464 one full day, seeking employment. However, the only paid work he obtained was on the
461 entrepreneur's construction contract at the airstrip. Since the completion of road construction in the area, paid work other than labouring for settlers has been difficult to obtain. Isemba has sought work requiring responsibility, for instance, as a storeman, rather than casual labouring, but even in Popondetta responsible work is rarely available and there are many other men of similar age and with similar or better educational qualifications competing for the same few vacancies.

512 Isemba is active for an average of 49.5 hours per week. His most time-consuming
461 task is fishing, usually with friends of the same age, and this is probably regarded as
[226] recreation as much as productive work. It accounts for 20 per cent of the week's activities. Sago-making is also important in the dry season. In the category of other food-producing activities over one-third of the time spent in subsistence gardening is in planting taro, sweet potato and minor crops and one-half in clearing and harvesting. During period III, he made a garden independently of his brother for the first time. This was intended for his brother's wife's use and served as a return for the food he received as a member of the household. Productive subsistence activities account for 21.4 hours a week.

[434] Isemba's main cash-producing activity is paid employment. He also assists his brother and others in their coffee gardens and spends some time in marketing. In fact, he never acquired any cash in the Popondetta market: he threw away unsold siporo (limes) and gave unsold bush-turkey eggs to a friend. However, in November, he caught a 4 ft long crocodile in the Girua River and sold it to a Chinese merchant in Popondetta for $4.50. The 2.1 hours spent on purchasing are partly on his own account and partly as a service to others, since purchasing provides a reason for travelling and meeting friends.

[883] Apart from the category of other food-producing activities, social activities consume most time during the week, with a slightly higher proportion spent on visits than on organised feasts and parties. These visits are brief and distinct from those considered in discussing absences and are one of the most typical aspects of the behaviour patterns of
[796] young men. A closely related activity is church attendance, which occupies over an hour a week because Isemba often walks to services at Ijika, again in order to meet his friends. His visits to the aid post take up more time than the average spent even by women with

While efforts have been and continue to be made to organise communal cash cropping, based initially on the expatriate assumption that voluntary co-operative effort is a feature of the culture and an instrument for increasing productivity, they largely fail. Although the communal rubber planting in Sivepe continues to be worked, this is not a reflection of good management but rather of the intrinsic hardiness of a tree which has been planted in its natural habitat, the forest, and is subject to the depredations of few diseases or pests. In Sivepe, work groups in cash cropping are no larger than in subsistence, although in Inonda they are substantially bigger, perhaps on account of the influential role of the entrepreneur. The point remains that work groups incorporating individuals other than members of an individual's families of procreation and orientation are not typical of subsistence production in this area, with the exception of those activities which physically require the participation of a large number of people as, for instance, sago-making.

In both communities the choice appears to lie between subsistence production plus peripheral commercial activities on the one hand and migration out in search of full-time employment on the other. In Sivepe the latter course is frequently taken, not only by single men, but also by some with dependents, who remain in the village in the care of parents. With 37.8 per cent of the potential adult male labour force absent and a number of dependents staying behind, a considerable burden is placed on the remaining residents in Sivepe. Only 25 per cent are absent at Inonda and no dependents have been left in the village. Although the distinction is not manifested directly in the length of the activity week in the two villages, it probably accounts for the greater incidence of temporary absences recorded in the latter - 17 per cent of total available labour time compared with 6 per cent in Sivepe - in that the slightly higher proportion of adult males to total population makes the subsistence economy less restrictive on individual mobility.

While activity patterns suggest that cash-producing activities are added to the subsistence pattern with little apparent stress, the question does arise as to whether <u>given the existing technology, socio-economic matrix and level of productivity</u> the communities have already expanded their commercial activities to the optimum level. There is no evidence that the expansion of cash cropping and paid work has resulted in any commensurate contraction in the time devoted to non-productive activities. The data confirm Fisk's general hypothesis (1962) concerning the availability of surplus labour. Although the Orokaiva are, by any objective standards, a reasonably active people who spend little time on informal social and ceremonial activities associated with the subsistence sector, and although, perforce, activity is restricted essentially to the daylight hours, there are some 6 hours per man-day remaining apparently unutilised. At present this time is distributed between resting, eating meals and informal socialising within the village.

Chapter 13

Rural productivity and capital formation

It has been demonstrated that, among the men at least, there is a significant amount of unutilised labour time available and that, although the Orokaiva are evidently committed to the cash economy, individual involvement is marginal. In particular, the commercial production of agricultural crops is poorly developed. Since this is the one form of enterprise which would appear the least disruptive of the subsistence routine and which exploits the available resources of land, labour and customary skills some explanation is required.

Although no direct evidence is available, Orokaiva diet, like that of many New Guinea societies, is probably adequate in calories but deficient in protein content. The ability of adults to undergo sustained periods of hard work, either in employment or in such subsistence tasks as sago-making, suggests that diet does not impose serious limitations on their productive capacity. It is worth noting, however, that there is a marked falling off in the level of activity in Sivepe during the dry season at a time when the diet, heavily reliant on sago, is least satisfactory. Moreover, this coincides with the coffee flush.

Both villages have access to more agricultural land than is required for subsistence. Crocombe and Hogbin (1963:10) estimate that, at Inonda, there are 580 acres of 'good gardening land available', of which only 127 acres are presently required. Rimoldi (1966:20-1) estimates the Sivepe sample's requirements to be 110 acres out of an available area of 138 acres, all of which is considered suitable for cultivation. In the former village only about 5 acres are under commercial crops (coffee, coconuts and cocoa) and 4.6 acres in the latter (coffee and rubber). Accessibility may be important in the failure to plant additional areas under cash crops. The preference for establishing such plantings close to the village at Sivepe, where the initial processing is carried out, has already been noted.[1] In the case of Inonda the degree of commercialisation is influenced

[1] See pp.110-11. A
A,[See Category 361, pp. 110-111--Analyst]

Appendix 1

Sivepa and Inonda: characteristics of the samples

(i) Demographic

	January 1964	Births	Deaths	Arrivals	Departures	January 1965	Net change
Inonda	35	nil	nil	3	7	31	-11.4%
Sivepa							
Village	114	3	2	3	20*	98	-14.0%
Sample	63	2	1	3	17	50	-20.6%

(ii) Household

	No.	Size		Labour units		With individual cash crop holdings
		Average	Range	Average	Range	
Inonda	9	3.9	1-6	2.0	0.8-3.4	4**
Sivepa						
Village	23	5.0	1-10	2.5	0.0***-4.5	10#
Sample	14	4.5	1-7	2.4	0.8-3.8	4#

(iii) Educational experience of the sample household heads

	None	Prep. to Std I	Std II to Std IV	Std V to Std VII	Std VIII plus	Agricultural training	Technical training
Inonda	3	2	1	1	nil	1	1
Sivepa	9	4	1	nil	nil	nil	nil

(iv) Work experience of the sample household heads

	Period##								
	Under 1	1-1.9	2-2.9	3-4.9	5-6.9	7-9.9	10-14.9	15-19.9	20 and over
Inonda	1	1	nil	2	3	nil	nil	1	1###
Sivepa	3	1	1	3	2	1	1	nil	2#

* Eleven (55 per cent) moved to other villages, the balance sought wage employment either within the District or in Port Moresby.

** One man planted 200 coffee trees during 1964.

*** An aged widow.

However, all villagers have access to a communal rubber plantation, tapped on a rota basis.

An expression of the number of years in paid work (where unskilled) multiplied by 1.5 (where skilled but without responsibility) and multiplied by 2.0 (where skilled with responsibility).

This man served 27 years as a mission teacher and has a total 'work value' of 62.

Both served as village officials (either village constable or local government councillor) for many years.

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Appendix 2

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Sivepe and Inonda: adult male absentees, by location and employment, December 1964

	Inonda*	Sivepe
Location		
Northern District	nil	5
Port Moresby	1	7
Other Papua-New Guinea	nil	2
Employment		
Plantation	nil	3
Urban	nil	2
Agriculture	nil	1
Cook	1	nil
Police/prisons	nil	2
Technician	nil	1
Clerk	nil	2
Unemployed	nil	1
At school	nil	2

* In addition to the absentee shown here, two families had left Inonda to live in nearby villages.

121 It became evident that the best tests were those that depended least on the translations of test instruction but utilized miming procedures for maximum communication. The performance of the test items and the test itself are part of the progressive communication and elaboration of the task.

The present study

125 [121] Seven different groups were tested. These had been selected previously by the New Guinea Research Unit for special study because of their different approaches to land tenure.

A description of the samples in order of testing is given in Table 1.

It was decided to take a sample of 20 adult males from each group. Many of these had already been included in studies planned by or undertaken in conjunction with the New Guinea Research Unit.

In the village of Inonda there were insufficient adult male testees, so numbers were supplemented by ten from the nearest related group, Hohota, about five miles away. In addition, at the time of testing three men were added to the Sivepe sample from the related village of Binduta to bring the sample size to 20. At Beporo a sample had already been selected from the Kurou clan and this was supplemented by testees from six other clans to complete the sample. The samples at Ongoho and Borugasusu were just sufficient in size to be complete. The ex-servicemen sample had been previously selected for fuller study. They came from Isevene, Sangara and Girua.

[464] Plantation labourers were selected randomly from the lines of Orokaiva tappers and clearers. Plantations often draw upon one type of labourer who may or may not come from one tribe or region. Three plantations were used to reduce any bias. They were 'Awala' plantation, 'Kagana' plantation and 'Mayoh' plantation. These labourers were not the same individuals as those studied by Howlett.

The tests used

121 125 In this study an item is defined as a single unit in a series of similar units. It is complete in itself but when joined together with the other items forms a test. A test then, is a number of similar items following the same rationale. A battery is a number of tests that can be combined in any way, depending on the requirements.

accessible by road, enable more efficient agriculture extension services, facilitate pest and disease control, and permit a centrally located cocoa fermentary.

To ensure competent local supervision of the establishment of the cocoa plantings, the Agriculture Department Extension Service built a village on the north bank of Ononda Creek. Here trainee agricultural field-workers lived while they worked with the Yega advising and assisting them in the unfamiliar tasks of laying out their blocks, 'lining' the shade trees and ensuring correct spacing of the cocoa trees. The D.A.O. entrusted a local Yega man (Napoleon Aiga of Sambori clan) with the supervision of this work. Although he is not a trained agricultural worker (he was a clerk in the agriculture office at Ioma when selected for the job), Napoleon is a man of great drive and ability; he had the confidence of the Yega and was able to direct and control the trainees who worked with the villagers in the early stages of the scheme.

Beginning in May 1960, an area approximately 7 by 120 chains was rapidly cleared by communal labour with most of the men of all Yega clans taking part. Provision was made for a road down the centre of the cleared area; 48 blocks were marked off, 24 on each side of the central road on 5-chain frontages. The number of blocks was based on the number of men who originally showed interest in participating in the project, plus two special blocks: one was allocated to the mission and one beside the Gona-Popondetta road was reserved as the site for a future fermentary. The remaining 46 blocks were allocated by ballot to participants in the work. The 46 men to whom blocks were allocated represented almost all Yega lineages; those lineages not represented were ones in which only old people remained in the villages, the young men having left home to work in paid employment elsewhere. After the ballot, one week was allowed for voluntary exchanges before a firm list of blockholders was drawn up. This firm list was, however, still subject to alteration within the framework of the traditional Yega land tenure system. Any cultivator considered to be unsatisfactory could be disciplined by the land custodian; if a blocholder failed repeatedly to comply with the standards expected he could be dispossessed, and his block reallocated to another cultivator. One such reallocation did, in fact, take place late in 1960.[1]

[1] The blockholder ignored three warnings from Nixon about his laziness. As a result he was dispossessed and his block allocated to another cultivator; compensation of $3 for work done already was paid by the new blockholder.

Table 2

Ages of blockholders in the Yega Scheme compared to other Yega men of working age

Age grouping	Men with cocoa block		Men without cocoa block		Men working away from villages	
	No	%	No	%	No	%
Under 30	7	15	13	20	53	62
Over 30 and under 40	16	35	17	26	23	27
Over 40 and under 50	17	37	17	26	6	7
Over 50	6	13	18	28	3	4
Total	46	100	65	100	85	100

Note. Ages are in most cases estimates and for the last category estimates by informants.

Table 2 indicates that, of the 46 cocoa blocks in the Yega Scheme, 33 (or 72 per cent) were held by men aged 30 to 50, slightly more than half of whom were over 40. Only 28 per cent of the persons allocated blocks were either under 30 or over 50 but nearly half the persons not allocated blocks were in these groups. The larger number of old men without blocks is understandable. They had few needs other than food and betel nut and the cost of small luxuries like sugar and rice could usually be provided by their sons. On the other hand, there was a very strong desire to obtain cocoa blocks on the part of middle-aged men who did not yet have them. There were few men aged 40 years or over working away from the village, though most of them had been away during their youth. The table emphasizes the distinct preference of young Yega men to work for wages away from home rather than to remain in the village: 89 per cent of the men working away from the village were under 40. Other data showed that 79 per cent of all bachelors over 16 years of age were working away from home or had recently returned from wage employment.

In addition to their earnings from cocoa production, Yega villagers had four sources of income.

i. Exchanging surplus agricultural produce with the mission, which gave tobacco, razor blades, needles, fish hooks, salt, etc. in exchange to the value of one penny per pound weight of produce. This mission barter enabled the Yega to obtain small useful items with no loss of time, for even though prices at the Popondetta market were about three times higher, to get there required about half a day's walk in each direction carrying the produce.

ii. The marketing of agricultural and marine products and handicrafts. Yega participation in the Popondetta market held

Work patterns

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Traditionally among the Yega members of one lineage worked together to clear the forest in preparation for planting food gardens. The cleared patch was subdivided among those who helped with the work. Planting and caring for the growing crop was the responsibility of the individual and his family. This traditional pattern was modified when clearing rain forest for the Yega Scheme when the able-bodied men of all lineages worked together. The cleared blocks were then allocated by ballot and the individual concerned was responsible for planting shade trees, laying out a seed bed, planting out the young cocoa trees, 'lifting' shade as the trees increased in size, and keeping down the weed growth. In most instances, relatives who helped the blockholder with these tasks were compensated. For example, the cocoa pickings on 29 July (see Table 1) by Aubrey and John Livingstone were made from the same blocks as those by Ethelbert and Livingstone on 1 July. Aubrey is a member of the same lineage as Ethelbert and John Livingstone is a son of Livingstone. As part payment for work done previously on the blocks these two men were permitted by the blockholders to harvest one month's cocoa production. Other relatives who had helped with the work would be given a similar privilege.

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Late in 1962 and early in 1963 many Yega moved their homes to the new villages of Ononda and Binjapada (see Table 5)[A], the reason given in every case being to live closer to their cash-crop areas. In January 1963, however, the move had not resulted in a significant increase in the amount of time spent on the cocoa blocks.[1] This was because of the time spent building their new houses. Only one man out of 12 spent any time working on his cocoa block during the period 14-28 January. The remainder divided their time about equally between building and work in their food gardens, which were scattered between the coast and the new cocoa blocks.

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Several attempts were made to introduce communal labour into the production of cocoa. The first was organized by a blockholder, Wilfred Upena, early in 1963. He and 17 others belonging to five different Yega clans agreed to do a day's communal work clearing rain forest to extend each man's block in turn. As the originator of the scheme, Wilfred's turn was first and an acre of rain forest was cleared on his block on the first day. But on my return a year later no further communal work had been done by the group.

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[1] An unsupervised record of daily work was kept by a man living at Ononda from 14.1.63 to 28.1.63, but it was of only limited value.

A. [For Table 5, see Category 166, p.43--Analyst]

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[614] The second attempt at communal labour was by the men of Kurou clan, who agreed to work on specified days on the two cocoa blocks allocated to Kurou members. This scheme was initiated in mid-1963, but only two days' work was done.

The third attempt at communal labour, in July-August 1964, owed its origin to a suggestion made by the Yega councillor in the newly-formed Oro Bay Local Government Council that the Yega should perform communal work on the cocoa blocks on Tuesday each week. The work to be performed was only cutting grass and clearing additional forest, not harvesting cocoa. The first two work periods under this system were observed and the workers counted by a Papuan assistant. The results were remarkable. On both occasions over 60 adults worked for times ranging from 3 to 8½ hours, with a mean time on the two days of 6½ and 8 hours respectively. No matter what time people started work, 'knock-off' time was by whistle at 4.30 p.m.

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461 Cocoa was harvested by individuals. Details of the work times of two men harvesting cocoa for sale to the fermentary representative were observed as follows:

Ethelbert, 1.7.64 (assisted by son aged 6 and daughter aged 8)

Walk from village to cocoa block	25 minutes
Harvest 205 cocoa pods and collect in one spot	55 minutes
Remove beans from pods	50 minutes
Await arrival of fermentary vehicle, weigh produce, await payment	1 hr 35 minutes
Total	3 hrs 45 minutes

Aubrey, 29.7.64 (unassisted)

Walk from village to cocoa blocks (including visit to friend on way)	45 minutes
Harvest 103 cocoa pods	1 hr
Remove beans from pods	40 minutes
Await arrival of vehicle, weigh produce, await payment	2 hrs 10 minutes
Total	4 hrs 35 minutes

[434] The cash reward for labour performed may be seen in Table 1. Ethelbert received $1.12 while Aubrey received $0.68.

Work on this scheme had not progressed far at the time of observation because of unseasonable weather. Underbrush and small trees had been cut by each individual on his block but it was decided to wait for dry weather before cutting the big trees by communal effort. All Yega would then be invited to help and helpers would be recompensed after the clearing of each block by a feast given by the blockholder and his family.

As with the Yega Scheme, the advice and help of Agricultural Extension Service officers was requested and given. The site was inspected and soil suitability evaluated before the Yega started clearing. However, although the layout of the Berojou blocks closely resembled the Ononda blocks, they are half an hour's walk along narrow footpaths from the Gona-Popondetta road, the only vehicular road in the area.

The people concerned in the scheme lived in various places. Most lived in the Konje area, one at Humburada, one at Gatara, while eight lived in Beporo and one further away at Gombe. However, it was likely that the Beporo and Gombe people would move inland in the near future. There was at the time no talk of moving home sites to the new cocoa blocks at Berojou.

Conclusions

The clearing of rain forest for planting blocks with permanent tree crops whose produce was to be sold for cash was a radical departure from traditional Yega land usage. The Yega Scheme incorporated traditional principles of land tenure and work organization with modifications to meet the changed circumstances of today. Features deriving from traditional precedents were:

(i) the use of communal labour to clear the forest, and the subdivision of the cleared area among those who helped in the work;

(ii) the absence of any documentary record of the transference of rights to individual right holders (although this was later provided under new legislation);

(iii) the organization of group labour for certain tasks even though recruitment of members might not necessarily be based on purely traditional criteria;

(continued)

planted, in one case the wife was, in one case the father's sister's husband, in another the half-brother by a different father and in the last case, the father of a half-brother.

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(iv) the strong desire of individual members of extended families each to have personal control of a piece of land and of useful trees on that land.

The aspects which had little precedent in traditional custom were

(i) the systematic layout of blocks;

(433) (ii) the production of crops for sale;

(242) (iii) the supervision and guidance of Agricultural Extension officers and workers, most of whom had no kinship ties with the Yega;

(361) (iv) the provision for the location of a blockholder's dwelling on the block itself rather than in a village.

The value of the Yega Scheme is this combination of old and new which was achieved by basing the scheme on traditional precedents in so far as they were appropriate and incorporating innovations where necessary. The main innovations were organizational and technological - involving new crops, new husbandry techniques, new processing methods and equipment. There was an increase in some forms of group activity, for example bush clearing by all the Yega (whereas bush clearing was traditionally carried out by sub-clan groups), and the proposed co-operative fermentary and marketing facilities. On the other hand, a greater dispersal of residence and the adoption of new mores were responsible for some diminution of traditional forms of group activity. In pre-contact times the family was the basic unit for garden work but larger groups formed for other activities. With the addition of cash crops, agricultural work took more time and many of the larger groups for fishing and social activities atrophied.

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The rights of the individual in cash cropping land will become more marked in relation to those of the sub-clan and tribe. Whereas food gardens were held by individuals or small descent groups and rights at this level were flexible due to rapid demographic changes and the system of land rotation, cocoa is a relatively permanent crop and the planter is associated all his life with the land on which the trees are planted. With change in the legal status of the land the rights of the social group to the cash crop lands are certain to diminish in favour of individual rights.

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The new pattern of residence, showing tendencies towards 'ribbon' development and particularly towards the dispersal of homesteads, varied markedly from the traditional form. Most significant of all variations from tradition was the location of homesteads by individuals on potential extensions to their cocoa blocks. With the registration of individual title to these lands it seems likely that this trend will continue. If the trend towards dispersion

of Orewo lineage of the Kurou clan of Yega, who had been educated to Standard IV at Gona Mission School and had spent the year before the war working at Bunting's store at Cape Killerton. Just prior to the war he joined the Papuan Infantry Battalion and became a corporal. During the war an Australian soldier with whom he was friendly convinced him of the possibility of raising money from short-term crops. The Administration had introduced copra-making much earlier, but prices were low and there was little enthusiasm for the crop.

Even before the formation of the G.P.T., Samuel had convinced most of the Yega of the desirability of co-operative farming. Subscriptions were called for: money was available from war damage compensation and most Yega households subscribed from $10 to $20, each person contributing as much as he wished.

Clearing bush for the co-operative gardens was begun at four sites in mature rain forest at Ononda, Garara, Humburada and Ingaba-Betari. Little information was available on the subsequent operations at Humburada and Ingaba-Betari but some details were obtained for the Ononda and Garara projects.

Samuel placed an ex-serviceman comrade in charge at Ononda. A site was selected by Nixon Kairembora, the Yega 'land custodian', between Ononda and Epa Creeks.[1] Meanwhile some of the neighbouring Beuru and Ahora people obtained Samuel's consent to join the Yega in their co-operative efforts, paid him money and were permitted by him to assist with the clearing of bush at Ononda.[2]

Crops were planted at Ononda by co-operative effort for two years. The man in charge says that good crops of peanuts were grown and sold to the Administration, being taken by headload to the coast, thence by canoe to Cape Killerton. The money from the sale of these crops was paid to Samuel Ungega who banked it at Higaturu. Unfortunately, no records of the amounts obtained are now available.[3] Large quantities of sweet potatoes were also

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[1] For the history of this land see pages 30 and 48 and Fig.7 of the previous article.

[2] When asked whether the fact that the Ahora and Beuru had cleared bush at Ononda would strengthen their claims to the land the Yega replied in the negative. They stated that non-Yega were employed only in the capacity of workmen: they were paid in produce at the time and had no further rights.

[3] One of Samuel's brothers, who was a young boy at the time of Samuel's death in the Mt Lamington eruption, said he remembered numbers of Samuel's books being burned and thrown away in the bush when relatives went through his belongings.

The finances of the store were under continual surveillance both by the local inspector and by the Assistant Registrar of Co-operatives in Port Moresby to whom regular reports were submitted by the inspector. A general reserve fund was maintained and was fully invested. Provision for depreciation was made every six months; this money was banked so that the provision of a new store building would be possible within about ten years.

The Cape Killerton store operated as a normal retail trading store but over three quarters of its business was conducted with its shareholders. In January 1963 there were 578 shareholders in the Gona villages co-operative store, of whom 108 (19 per cent) were Yega people. Yega shareholders purchased 34 per cent of all goods sold[1] while non-shareholders bought 13.5 per cent.[2]

The high rate of spending of Yega shareholders relative to the total membership was because the Yega people live nearest to the store at distances ranging from nil to four miles, and because the Yega probably received a higher cash income than the other groups.

The Yega had since the early 1930s been within walking distance of one of the best mission schools in the Northern District, with a European teacher permanently on the staff. In consequence young Yega men, who almost without exception left the villages to enter paid employment, were able to obtain skilled and semi-skilled jobs. In a sample group of 18 such wage-earners interviewed, the average remittance to relatives and friends in the village during 1962 was $110 p.a. As 40 per cent of the adult male work force was absent in wage-employment, a considerable amount of cash was being injected into the Yega economy. In addition, some Yega obtained a regular cash income from produce sold in Popondetta market (see Dakeyne 1965:102 ff.).

Expansion of membership in the G.V.N.S. Co-operative had almost ceased in 1964: 561 members in 1958 increased to 578 in 1961. As a branch store was opened at Buna in 1962, effective shareholder support for the Killerton store seemed likely to diminish. In any event there could be no major increase in shareholder numbers among the Yega, for nearly every adult Yega man resident in the area was already a shareholder in the co-operative. The bulk of the store's business was done with its shareholders but non-shareholding friends, such as members of a shareholder's family or visitors from the towns, were asked by shareholders to use their share numbers when making

[TEXT CONTINUED ON PAGE 67]

[1] Calculated from the rebates given in December 1962.

[2] Calculated on the basis of sales for the months October-December 1962.

CHAPTER 4 - WORK ORGANIZATION

Characteristics of the work force

464 At the time of our survey there were 23 persons of 15 years of age and over living in the village. One old man was very frail, and one woman who was visiting her brother while she recuperated from an injury, did no productive work. There were no girls between the ages of ten and fourteen, and only three boys. Two of the boys were temporary visitors and did not stay for long and the thrid, a lad of about ten years, was never seen to engage in any productive work. Children of nine years and under frequently helped with domestic chores like carrying water and firewood, but they took little or no part in agricultural production. This left a work force of 11 men and 10 women, though one man died during the survey, thus leaving equal numbers of each sex.

464 As shown in Table 9 below, all Inonda household
166 heads except one had been employed,(1) and they had spent at least part of that time away from their home village. With the exception of those employed as teachers, village councillors or village constables, almost all the men had gone away to work before they married (and marriage was consequently delayed for these men). There was no pressing economic reason for young single men to remain in the village, for subsistence gardening is primarily women's work and such men's work as there is to do
888 can usually be done by the head of the household. In fact the
554 people have come to regard a trip away to work as a necessary prerequisite to adult life. It gives an opportunity to earn money (much of which is saved in order to acquire a bride on return to the village) as well as prestige, and the one man who had never had paid work was mocked on that account. Only one Inonda man was employed away from the village at the time of the survey. He was a single man who was working in Port Moresby (and was not included in the survey).

(1) There were three men who were not heads of households. Two were old men who had not had any paid work as it had not been available in the time of their youth. The other was a young man who had spent 4 years as a medical orderly. Three women had been employed - two had spent a year each as teachers and one had spent a year in domestic service.

Table 9

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Summary of years of paid work undertaken by household heads

Household	Within own village					Within own district				Other districts				Total					
	Councillor or constable	Driver	Teacher	Unskilled worker	Total	Teacher	Agric. foreman	Unskilled worker	Total	Driver	Teacher	Unskilled worker	Total	Councillor or constable	Driver	Agric. foreman	Teacher	Unskilled worker	Total
1	12				12		2	3	5					12		2		3	17
2					-				-				-						-
3		1			1			2	2	3			3		4			2	6
4	2		2		4			1	1		4		4	2			6	1	9
5								4	4									4	4
6				2	2			2	2			3	3					7	7
7				1	1		4		4							4		1	5
8			9		9	18	3	2	23							3	27	2	32
	14	1	11	3	29	18	9	14	41	3	4	3	10	14	4	9	33	20	80

It will be seen that the 7 household heads who have worked have spent a total of 80 years in employment. Only 20 of the 80 years were spent in unskilled occupations, the remainder (as councillors, constables, foremen, drivers, teachers) all carried some element of skill or responsibility.

The formal education of household heads is summarized in the following table.

Table 10

Summary of education of household heads

Household No.	Within own village		Within own district		Other districts		Total	
	Years	Standard reached	Years	Standard reached	Years	Standard reached	Years	Years x standard reached
1	-		-		-		-	0
2	-		-		-		-	0
3	2	1	-		-		2	2
4	5	3	2	4	-		7	23
5	-		-		-		-	0
6	3	1	-		-		3	3
7	6	2	-		-		6	12
8	-		10	8	3	10	13	130
	16	-	12	-	3	-	31	175

Patterns of work

The villagers claimed that they work to a pattern and that Monday and Tuesday are cash cropping days, Wednesday is for mission work, Thursday and Saturday are reserved for the food gardens, Friday is set aside for council work, and Sunday is a day of worship and rest. In fact, however, with the exception of men who are working for wages and have week-ends off, there is little in the way of a weekly rhythm in the organization of work. There is usually a short church service held

464 When wage labour is available locally it is keenly sought after by the villagers. Two men had regular work for the Public Works Department. In addition some casual work was available at various times during the year on a local construction job. All the able-bodied men under about forty years of age offered themselves for work at such times but there was not always sufficient work for all to be employed. Table 12 shows that those men who were engaged in paid work for 40 or more hours per week still spent an average of 6.0 hours on subsistence activities (this is just under half that for all men in the village). They spent much less time on social obligations and travel, and had much less leisure time. This is illustrated in more detail in Diagram 1.(1) Owing to the absence of the paid workers during the day their wives had to undertake more work in the gardens, though in many cases a young male relative of the wife came to help her from time to time.

512 461

Table 12

Subsistence work done by men who were also engaged in full-time paid work

	Men in paid work	Total hours work on subsistence	Average hours per man
1st week	5	61	12.2
2nd "	5	nil (feast)	0.0
3rd "	No man had a full week's work this week		
4th "	1	nil	0.0
5th "	1	6	6.0
6th "	1	11	11.0
	13	78	6.0

Note: One man was omitted from the table as, though he was paid full time, he did not have to work full time and was able to do his subsistence work in his employer's time.

(1) It should be noted, however, that those who were accepted for employment were the younger, more energetic men who would probably have done more work than the average in any case.

512 461 241 Owing to their employment, the paid workers were able to spend less time on food production, and the average area of food garden was less (per consumption unit)(1) in households where the adult males had paid employment than in those where they did not. The three households wherein the only man had paid work had an average of 0.72 acres under cultivation per consumption unit, the two households wherein the only man did not have paid work had an average of 1.66 acres under cultivation per consumption unit, and the three households containing two men (in each case one working and one not) had an average of 0.79 acres per consumption unit.(2) Food intake was maintained partly by the purchase of store foods, particularly rice. Moreover, the wives of paid workers spent more time than usual in subsistence production, and concentrated more than the wives of other men on harvesting for current use more than [464] cultivation for future use. Planting is not maintained at the normal level when paid work is available, but as the work is casual this has no serious effects (for extra cultivation is done [465] when paid work is no longer available). The present pay-rate of £1.10.0 for a 40 hour week is not sufficient to feed a family from store foods alone, so that continuous work at these rates would probably result in a decline in living standards.(3)

512 461 Men who are engaged in paid work still engage to some extent in other types of productive work. The main substitution is not paid work for other productive work, but paid work for non-productive occupations. This is illustrated by Diagram 2 which compares the activities of paid workers with those of all men for the whole period.

The amount of time spent on social obligations is probably somewhat higher than usual owing to the death men-

[125]

(1) Any person 10 years of age or over was rated as one consumption unit, children 4 - 9 as half, and infants 0 - 4 as one quarter. Temporary visitors were excluded.

(2) The average for the households with two adults was reduced by the fact that in two cases the men remaining at home were either ageing or suffering from long-term illness.

(3) The most reliable indicator of nutritional requirements is the rations scale in the Native Labour Ordinance 1958. This ordinance prescribes minimum quantities of foodstuffs required for indigenous workers and their dependants. The retail cost of the supplies listed is approximately £1.3.0 per week for a single man or £2.19.0 for husband, wife and three children. These prices are for food only.

[TEXT CONTINUED ON PAGE 68]

245 half acres of coffee or cocoa. This would yield no income for
434 the first four years and a maximum of £100 per year thereafter at current prices. This assumes an absence of land problems and crop disease. Even so, the prospect must be heavily discounted because of its uncertainty. Wage labour is now available to a limited extent at a rate of £150 per year in town areas and about £75 per year in rural areas.(1) At the time the coffee was planted, paid employment was scarcer and wages much lower.

471 Capital: Almost no capital is used in primary pro-
245 duction in Inonda. The few tools needed for small scale production are easily acquired from current income, the land is not an item involving monetary cost, coffee seeds are available from neighbouring gardens and cocoa pods are supplied by the Department of Agriculture at nominal cost. One man in a neighbouring village has a coffee huller in which the Inonda people have small shares, but as the Orokaiva Coffee Growers Society (to which the Inonda growers belong) provides for all other processing, there is no need for any other equipment in the villages. Although the introduction of capital may increase output, considerable increases in output are possible without it, and capital cannot be regarded as a serious limiting factor in Inonda cash cropping at this stage.

164 Health: During the period of the survey about 7% of
461 time was accounted for by sickness and caring for the sick, but details of sickness were not recorded for those who were in mourning in their houses. The total for the period is estimated at 10% of all time accounted for. From superficial enquiries malaria seems to be the main cause of illness but other common ailments seen during our stay were filariasis, gastro-enteritis and influenza. The suitability of the diet for sustained hard work is not known, though it was noticed that men seldom work two days in succession on heavy labour like bush clearing (though they performed regular heavy work for wages). On several occasions when the nights were particularly cold the people got up shortly after midnight and sat around fires for the rest of the night to

(1) Indentured labour is paid less, but relatively few Orokaiva are prepared to accept indenture. Direct comparison of gross incomes from cash cropping as against urban employment ignores the fact that food and housing costs are much higher in towns.

duction is at present so small that it is not difficult to take coffee or cocoa on foot and there is every indication that transport services in the roaded parts of the district will be available before output is greatly increased.

Coffee is sold to the Orokaiva Coffee Growers Society in Popondetta and cocoa to private traders. Cash is paid at the time of sale and in the case of coffee a bonus is also paid at a later stage if profits permit. Marketing facilities cater adequately for present production. (1)

The situation regarding perishable products is quite different. The only outlet for fresh fruits and vegetables is at the Popondetta market which is held every Saturday. Market prices are low (by comparison with those at Port Moresby or other larger markets) and most commodities are oversupplied. When produce is taken to market it is not uncommon to have to bring some back or discard it. The villagers could supply considerable quantities of fresh vegetables (particularly taro) if the demand for it could be increased. There is usually a keen demand for fresh fish, pork and poultry, and the market could absorb much more than is at present supplied. (2)

Some implications for policy

The surplus of underemployed labour among those villagers who do not work for wages (and local wage labour will soon cease with the completion of construction contracts) can be used economically in primary production in two ways. Firstly people can be encouraged to plant additional cash crops. It has been shown that this is hindered at present in Inonda by problems of land tenure. If these were overcome an increase in productivity would probably result, though it would be limited by the present traditional demands on time.

Secondly, a small proportion of the more active and

(1) For details of the export market for New Guinea coffee and cocoa see Reserve Bank, 1962.

(2) A detailed study of the Popondetta market by R. B. Daleyne is now being prepared for publication in this Bulletin.

472 to the Northern District none has lived within a village community in the way almost all Orokaiva live today. Their houses are built on their farms adjacent to their cash crops rather than in a village. The farms of A and B are within half a mile of their villages but C's farm is two miles away, while D, occupying a resettlement block, is nearly a hundred miles from his home village. (There were no resettlement schemes closer at the time.) The first three men were joined in their new houses by relatives, in addition to their own nuclear families, who lived with, or adjacent to, them and assisted in the cash-cropping.

472 464 The four entrepreneurs had engaged in paid work for periods ranging from twelve to twenty-five years, with an average of seventeen. This is considerably longer than the average for village Orokaiva,[1] and the entrepreneurs have each been engaged in a much wider range of occupations than ordinary villagers.

472 The work experience of one of the successful entrepreneurs, B, had been mainly in cash-cropping activities, but the other three had had little such experience and none of them had any experience or training in retail trading. On the other hand, all four had held posts involving considerable responsibility over people and property.[2]

[466] [463] A factor which can only be a matter of conjecture at this stage, 472 is that all four men appear to have drawn on the example of specific 554 persons as models for their actions. Their aspirations to higher 153 consumption standards, better housing, motor vehicles, education for their children, etc., appear to be very similar to those of the village Orokaiva people with whom I have worked. The main difference seems to be that most village people regard these goals as largely unattainable by methods at present open to them and are still seeking a clearer 'way' or 'road' to prosperity, whereas the four entrepreneurs have seen their goals as attainable by drawing on the models known to them from personal experience.[3] This is not to suggest that they have clear-cut or well formulated plans for development, nor that they are familiar with the economics of

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[1] Household heads at Inonda had spent an average of ten years in paid employment (Crocombe and Hogbin 1963b:59) and at Sivepe six and a half years (Rimoldi 1966:82).

[2] Their positions have included cook, labour recruiter, charge over food and equipment stores, foreman of plantations, of a coffee factory and of an oil exploration team, and police sergeant.

[3] In all four cases the models were European, but in the case of [177] Numbuk of Erap (Crocombe and Hogbin 1963a:1) the model was a successful New Guinean entrepreneur.

Cash crops

All four entrepreneurs were familiar with the very small scale cash-cropping which had been undertaken in their villages for many years, but because of the insignificant returns received from activity of this kind they wanted to avoid it. In discussions with the writer, they all referred frequently to their aim to plant on a large scale and to operate their plantations the way European planters did. The main differences were that the entrepreneurs were without capital and that they were prepared, at least until the enterprise was established, to undertake manual labour themselves.

The entrepreneurs A, B and C established their enterprises with the help of their wives and of certain close junior kinsmen. Each has occasionally hired labour, but none has been able to keep the workers for more than a few months (though one man worked for A for three years). The crops grown (coffee, cocos and copra) are all labour intensive. Moreover, A and B had to clear heavy forest and C heavy undergrowth. A was helped by two younger brothers and in more recent years by two sons and a son-in-law. B has had the full-time labour throughout of his younger bachelor brother who lives as a member of B's household. C was able to enlist casual aid from his two younger brothers in the early establishment phase (and to a lesser extent from his father and his sister's son for food gardening). It is perhaps significant that none of them has called on more distant kinsmen, and none has called on unrelated people of the same village or neighbourhood. The reasons they gave, when questioned, were that the local people were lazy or resentful of their relative prosperity and, in the case of kinsmen, that they might expect disproportionate or inappropriate reciprocity.

B entered into an agreement with four men of two villages a few miles from his own whereby they all helped each other clear separate coffee plots in 1952. As B's was much larger than the others he agreed to provide a small manual coffee pulping machine which all four could use. There was some dissatisfaction by those with small plots with the proportionate benefits derived from the mutual help arrangement, and when B established his cocos plot in 1959 only he and his brother worked on it.

What rights do the close kin acquire in the crops they have helped to establish? Orokaiva people frequently assist one another to clear land for gardens and this involves no obligation beyond reciprocal help. But planting, husbandry and harvesting were traditionally done by the household and were thus closely associated with rights to the crop. A's enterprise began as a joint venture with his brothers, though the initiative was provided by A. It was not until after World War II that he encouraged and assisted each of his brothers to plant their own individual coffee gardens. A's gardens were then to be for himself and his sons jointly.

241 Later again, in line with an agricultural officer's recommendation,
472 he encouraged each son to plant individually. He proposes that his
572 gardens should be inherited by his sons jointly, with work and
423 profits being shared by them.

428 B's bachelor brother speaks of the cash crops as B's even though both have worked on them equally together, but says that B 'looks after' financial and other matters on his behalf. Whichever of them dies first the other will inherit, but when both die the assets will be inherited by B's only surviving son, a former teacher who shares no interest in cash-cropping.

C claims sole rights to his plantation on the ground that he has compensated his brothers for their help with gifts and by assisting them to establish their own cash crops. There is reason to believe, however, that if C dies before his children are adult, his brothers will probably claim a share. Some other people of [578] C's village regard the plantation as belonging to several sub-clans jointly and their challenge to his rights was a real threat until he was issued a formal lease.

472 D has no younger brothers, but he did have a government loan
24 (though it was not intended for hiring labour). With the loan
464 and gross profits from his store (see p.11[illegible].) he has hired a
[654] total of seven workers at various times. As with the labour occasionally hired by the other entrepreneurs, they have all left within a few months of engagement. The employers give no adequate explanation for this and, as I have been unable to contact the former employees, the reasons can only be postulated. In some cases the employer has had insufficient money to pay them but this has not always been the case. Almost all employees have come from twenty to a hundred miles away and most are from different language [466] and culture groups from the employing entrepreneurs. This may well be due to the fact that the employer-employee relationship, with [591] its clear-cut subordination, has no traditional precedent and is incompatible with Orokaiva notions of appropriate interpersonal relationships. New relationships of this kind are probably easier to establish with strangers and outside one's own community.

Since his attempts to engage permanent paid labour were not [62] successful, in recent years A has frequently arranged for the [602] people within his hamlet (his children, his brothers and their children, two father's brother's sons and all their spouses) to undertake short-term tasks such as clearing or harvesting. At the end of each task he compensates them in cash or store goods. None of the others has developed this sort of arrangement.

472 The entrepreneurs have all benefited from assistance given by
654 government officers. Before the war A marketed his coffee through the government and he speaks of the Resident Magistrate assisting him to import and install a coffee machine and open a bank account.

Agricultural extension services were begun about 1950. A, B and D had close relations with particular officers and received significant help from them.

The number of cash crop trees owned by the entrepreneurs in December 1965 is shown in Table 2, together with the number of years since that person began cash-cropping. An attempt was made to estimate the number of adult male kin and the number of employees who have worked with each entrepreneur in terms of man-years, but this was unsuccessful because the people have no clear measure of the periods of time spent by each worker with the employer. Even when the period is reasonably accurately known it is difficult to use comparatively, for relatives who assist do so only from time to time and even employees were often not paid a regular wage nor expected to work all the time.

Table 2

Commercial trees owned by entrepreneurs in December 1965

Entrepreneur	Years since cash-cropping began	Coffee trees	Cocoa trees	Coconut trees	Total trees	Acres*
A	20**	4,400	3,500	-	7,900	22.9
B	14	2,512	1,153	-	3,665	9.6
C	13	-	717	340***	1,057	8.5
D	5	-	3,337	-	3,337	13.3

* Estimated from tree figures using conversion ratios of: 500 coffee trees per acre; 250 cocoa trees per acre; 60 coconut trees per acre.

** As most of A's pre-war trees were destroyed during the war, only his post-war cash cropping experience is considered here.

*** Most of these are old coconuts which were growing before C took over.

There may be a slight relationship between number of trees and the period since cash-cropping began, but I suspect there is a greater correlation between extent of cash crops and the supplementary labour used, whether mainly from kin in the case of A, B and C, or by using loan funds as in D's case.

Retail trading, manufacturing, processing and transport

All four entrepreneurs own stores. A and B aspired to own trade stores for many years but did not establish them until they had literate sons to act as managers. The other two entrepreneurs are themselves literate. An illiterate employee operates C's store but

the price at which he bought (e.g. a knife bought at 87 cents would be sold at 90 cents).[1]

Irrespective of profits, stores are both a convenience and a source of considerable prestige to the owner.

No records of customers were kept, but from casual observation it appears that customers are either persons who are unrelated and not resident in the same locality or close kin and close friends. The more distant relatives and the residents in the owner's village often go to considerable trouble not to buy from the local entrepreneurs. They justify their avoidance with stories which depict the trader in a personally unfavourable light, though some point to the lower prices and wider range of goods in Popondetta, and others to the advantage of buying from local co-operatives which provide rebates and benefit everyone, rather than from private stores with higher prices and individual profit.

These arguments should apply equally to the customers of the entrepreneurs, but they do not seem to in practice. I assume that this is due to the fact that the entrepreneurs do provide credit, assistance with life crises and other advantages (including the attraction of close association with men of prestige) to very close friends and kin, but decline to provide these privileges to more distant kin and neighbours. These people feel entitled to special consideration and are affronted by refusal. C, the trader with the largest turnover, built his store in a village other than his own[2] and most customers come from that and three neighbouring villages. Most people of his own village of Hanau buy from a co-operative store further away. A's main clients are plantation workers, as most of his fellow villagers use the co-operative even though it involves a long walk. D's store was located on a main road until a re-routing of the road left him without his main source of clients - people walking along the road.

Since 1964, D has been buying cotton piece goods which his wife makes up on her sewing machine into skirts, dresses and shorts for sale in the store. Demand for these goods is greater than the supply and a girl is now hired part-time to assist with sewing.

A, B and D sell small quantities of garden produce or hunted meat at irregular intervals at the Popondetta market.

A undertakes commercial processing for other persons, having established a cocoa fermentary with the help of agricultural officers in 1962. The building cost $500 from his savings and an

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[1] Having limited experience in handling money most of the entrepreneurs round prices to the nearest ten cents as far as possible.

[2] The other three all have their stores adjacent to their homes.

informal 'company' was formed to operate the enterprise. There were sixteen shareholders, all residents of A's hamlet or the absent sons of residents. A contributed $144 in cash while the others contributed $10 each. This money is used as working capital and placed in a Cocoa Account at the savings bank. It is controlled by A's eldest son, who is referred to as chairman of the company and is generally responsible for the handling and marketing of produce.

Wet cocoa beans were bought from villagers from moneys in the Cocoa Account at 3 cents per pound and fermented and dried. They were shipped through a local trading firm and sold on the London market. The fermentary has not been very successful because most villagers outside A's hamlet sold to a European fermentary which collected the beans and paid a higher price. Another, and perhaps more important, reason that the local fermentary was not patronised lay in tensions and divided loyalties within the neighbouring villages. From early 1962 until May 1963 only 7,080 pounds of wet cocoa beans were processed using the temporary fermentary. No later figures are available but the credit balance in the Cocoa Account rose from $174.07 in June 1963 to $470 in January 1966.

All four entrepreneurs aspire to owning a motor vehicle. A's early attempts were declined by officials,[1] and his attempt to establish a bus service in 1963 (for which he had sufficient finance) was thwarted when the only licence was granted to an expatriate. He still gives top priority to buying a vehicle for his own cartage and for hire. B had the funds but not the driving skill.

The difficulty of acquiring a skill such as driving is often overlooked. For a person in a rural area it is usually necessary to go to a town and get a job. Even then one may spend several years in an unskilled job without getting the opportunity to learn to drive. Few Papuans have vehicles and most people are naturally reluctant to allow others to practise on their vehicles. B's son has now tried unsuccessfully for three years to find an opportunity to learn to drive. C and D have each been seeking a cheap second-hand vehicle for some time, but the likelihood of establishing a successful carrying business is doubtful, for overheads are high, business would probably be irregular and many of the potential customers would have difficulty in paying. In the long term, as incomes rise, there will certainly be openings for such ventures. In the meantime, however, there is a danger that a transport business would survive only if it was subsidised in part at least from

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[1] Official approval was then necessary for indigenous people to go into debt.

Background experience

463 Education. Although the most successful group of entrepreneurs
472 had all had considerable education (more than three times the
871 average of the other two groups combined), the least successful group had had more schooling than the middle group. This is shown in the following table in which an index of education was ascribed to each person by multiplying years of schooling by standard reached.

Table 1

Index of education

A	20	E	0	I	56
B	63	F	9	J	30
C	15	G	0	K	45
D	9	H	6	L	56
Average	26.7		3.75		46.7

463 Travel. There may be a positive correlation between travel ex-
472 perience and trading success. All the entrepreneurs had travelled
484 beyond their own district and, as shown on Table 2, the most successful entrepreneurs had travelled more widely than the least successful.

Table 2

Relationship between travel experience and entrepreneurial success

Travel experience	A	B	C	D	E	F	G	H	I	J	K	L
Northern and adjacent districts (Morobe and Milne Bay)	'	'	'	'	'	'	'	'	'	'	'	'
More distant districts	'			'			'	'		'	'	'
Australia												'

463 Paid work. The number of years spent in paid employment corre-
472 lates negatively with the entrepreneurial success of the sample,
464 as under:

Table 3

Years of paid work

A	15	E	10	I	1
B	8	F	5	J	8
C	8	G	7	K	3
D	14	H	13	L	4
Average	11.25		8.75		4

When level of responsibility and status is considered, however, the position reverses: those who are most successful have held jobs requiring most responsibility.[1]

Table 4

Level of job responsibility

	A	2	E	2	I 1
	B	2	F	2	J 3
	C	3	G	3	K 1
	D	2	H	1	L 1
Average	75% at level 2		50% at level 2		75% at level 1

Social relations

Age. Average age is lowest for the most successful group but this is likely to be related to the fact that educational services were even fewer before and during the second world war than they have been since.

Table 5

Age

A	34	E	50	I	40
B	30	F	46	J	26
C	37	G	26	K	29
D	40	H	45	L	21
Average	35.25		41.75		29

[1] Level of responsibility was categorised as follows: (1) policeman, cook (pre-war), welfare assistant, medical orderly; (2) interpreter, labour recruiter, foreman; (3) storeman, clerical assistant, domestic (post-war), gardener, hunter, labourer.

Even those entrepreneurs who engaged relatives were not in favour of doing so, and none hired unrelated members of the same village. The traditional complex of relationships within the village tends to undermine the authority of a local employer, and this makes it difficult for entrepreneurs to enforce their orders. Wherever possible, they hire workers whose contact with the village in which the crop or store is located is minimal. They are usually hired as short-term casual labour on cash crops and are rarely employed in the stores. The employer-employee relationship has no traditional precedent and entrepreneurs try to follow their conception of a European model.

463 472 466 464 571 602 [177]

Table 11

No. of co-operating adult male kin

A	1	E	4	I	2
B	1	F	1	J	2
C	3	G	4	K	3
D	4	H	2	L	3
Average	2.25		2.75		2.5

Table 12

Labour engaged by entrepreneurs to help with cash crops

463 472 464 466 465

Entrepreneur	Labour: Extended family or siblings No.	Period	Payment	Non-relatives from same village	Non-relatives from different village No.	Period	Payment
A	-			-	1 1	1 month 3 months	$3/month and food - do -
B	-			-	-		
C	3	occasional	50c per week	-	-		
D	4	6 months establishing	food	-	-		
E	4	occasional	food and clothing	-	4	establishment	$4 per fortnight
F	-	previous casual help	food, etc.	-	-		
G	4	occasional	store goods, food and pigs	-	-		
H	-			-	1 1	1 month 3 months	$4 per month
I	2	occasional	food and clothing	-	-		
J	1	regular	food, no cash yet	-	-		
K	2	occasional	food, etc.	-	1	occasional	$1.50 per fortnight
L	2	short period	$2.50 per week	used to employ 3. Abandoned as unsatisfactory.	3	occasional	$2.50 per week

463 The five subjects who had hired labourers who were not related
472 to them all paid cash wages. A and H have received $1,500 govern-
464 ment loans to develop their blocks and have thus had the capital
426 to pay for labour. They have not relied on kinship assistance at
657 all. The loan has been an effective substitute for kin ties. L derives the capital necessary to hire labour from her trade store.

It will be noted that all non-relatives are paid in cash, but
463 most relatives are paid in kind. Most entrepreneurs are still
472 dependent on the help of relatives, as they do not have the cash
465 to pay hired labour, and are thus forced, willingly or not, to exploit their kinship ties.

464 Property

602 Land and cash crops. Most of the twelve subjects did not have any records of cash crop production or sales, so it was impossible
463 to calculate their success in cash-cropping according to these two
472 criteria. For this reason their cash-cropping activity has been assessed in terms of the number of economic trees each has planted.

423 Ten of the twelve entrepreneurs have cash crops, and another has
245 cleared land for 500 coffee trees. The following table shows that the most successful entrepreneurs have the fewest cash crops. The
[426 largest cash croppers (A, D and H) have leases of government land
427 and government development loans of $1,500, but even when they are
657] omitted the proportions between the three groups remain similar.

Table 13

Commercial trees owned by each entrepreneur*

Entrepreneur	Coffee	Coconut	Cocoa	Total economic trees	Title to land	Years since cash-cropping began	Average trees
A	100	-	1,085	1,185	L	3	
B	-	-	-	-	-	-	
C	334	88	-	422	C	?	702
D	-	-	1,200	1,200	L	4	
E	1,600	11	-	1,611	C	20	
F	300	46	100	446	C	9	
G	388	52	-	440	C	7	1,800
H	-	-	4,702	4,702	L	4	
I	-	170	200	370	C	11	
J	intends to plant	-	-	-	C	-	168
K	150	-	-	150	C	9	
L	150	-	-	150	C	10	

* Coconut and other trees used for home consumption only have been excluded.

245 Individual planting of cocoa was tried next, with twenty-one people planting between 20 and 1,300 trees each. The average [435] plantation size per person was 318 trees. Pests and later the sharp fall in world cocoa prices discouraged maintenance and most of the cocoa trees have now been abandoned.[1] Ten people have each planted between 200 and 560 coffee trees with moderate success. In view of this history of setbacks and discouragements there is added significance in the enthusiasm of the Ombi-Tara people for tenure conversion.

Origins of conversion

177 An Ombi man named Charles was instrumental in persuading the 464 people of the merits of conversion. He had attended the local mission school for two years and, after a year as a medical orderly at Saiho hospital, worked for eighteen months on a rubber plantation at Sogeri. Next he worked in Rabaul with two other Ombi men for an oil company. At the end of his eighteen months' contract the company returned him to Ombi. He had intended to return to Rabaul to take up a $24 a week job he had been offered as a taxi driver but was elected Local Government Councillor at Ombi-Tara and held that position for seven years until 1963. He has worked for eight months as a cook at the nearby Sangara ex-servicemen's plantations, and had intended to apply for one of the Papuan resettlement blocks at Sangara before he heard of the possibility 245 of establishing a tenure conversion scheme at Ombi-Tara. He planted 249 1,300 cocoa trees, 400 coffee trees and 300 bush rubber trees before conversion was introduced, and had planted 661 of the new high yielding rubber seedlings up to November 1965, well above the village average.[2] He has been employed full time since October 1965 on road maintenance work near Ombi.

242 Conversion at Ombi-Tara began with a visit by a resourceful Agricultural Officer (Mr D. Birmingham) in mid 1963. Noticing 249 Charles planting some bush rubber seedlings the officer asked whether he might not prefer to plant some of the higher yielding Malayan rubber seedlings which the Department of Agriculture would supply at low cost. Charles agreed and recommended other villagers to do likewise. The Ombi-Tara people agreed and a rubber nursery was established close to Ombi village soon afterwards by the

[TEXT CONTINUED ON PAGE 13]

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[1] The Ombi-Tara people's experience with cocoa demonstrates that a sharp decrease in world commodity prices can affect progress in developing countries not only by causing earnings of foreign exchange to fall, but also by so disheartening village producers that they cease production altogether.

[2] See p.32.A

A [See Category 245--Analyst]

657 man since tenure conversion was introduced. It suggests that in
423 situations of stress, as when sorcery is feared, traditional tenure patterns may take precedence over the newly introduced system.

Several people mentioned that they will in future share the proceeds from their rubber with non-blockholding kinsmen, but most said they would not.

Inheritance of converted land

657 In law blockholders may depart from the traditional pattern of
423 inheritance when disposing of their land. As far as could be
428 ascertained, most of the Ombi-Tara people wish to continue the traditional Orokaiva inheritance pattern, under which the first
[178] son generally has some precedence. The first son is not, however, the sole owner but rather the nominal trustee of the land for all sons. If the landowner has no sons, his daughters may keep the land in trust for their sons and in some cases the daughter's husband may also acquire some rights.

Several people intend to pass their blocks to the first son only and expect any other sons either to take up another block on what is now clan land, or to gain wage employment in an urban area.

Work organisation

657 The time spent in Ombi was too short to enable any conclusions
423 to be drawn about the effects of conversion on work organisation,
182 but a few general points may be made. There was no set routine in
512 the sense of particular days being set aside for particular kinds of work. A number of people reported that Wednesdays and Fridays are set aside for Mission and Council work when required. During our stay no Mission work was done and Council work was done only on the first Friday, when most of the men went to a village two miles away to cut the grass around the Administration school, due to open the following week. Gambling occupied many people for much of Saturday and Sunday but others carried out normal work in the gardens on these days.

657 Husbands and wives worked together on food and cash crops, but
423 I am unable to estimate whether husbands work more on cash crops
182 and wives more on food crops as has been observed at times elsewhere.
[462]

[464] Five men were employed on maintenance work on the Popondetta-
[465] Kokoda road near Ombi for the full period of our stay, receiving $6.42 a fortnight. The need for cash to pay the Council tax and the Mission jubilee contribution led five others to work on road maintenance during the final week of our stay. Although working a thirty to forty hour week, the five longer term roadworkers have planted an average of 410 rubber seedlings each which is greater than the average of 346 seedlings for all Ombi-Tara blockholders.

121 452 The need for credit at Ombi-Tara where rubber is being planted may be less than at schemes where other crops are being promoted.[1] Bauer (1948:318) stated that where tapping and processing of rubber is done by family labour, 'many small-holders could almost be referred to as no-cost rather than low-cost producers'. The visiting World Bank mission suggested that credit could play an important part in securing local interest in planting rubber in consolidated areas, in organising group processing and marketing, and in providing scope for enterprising men to increase production (International Bank for Reconstruction and Development 1965:111).

It has been suggested both by the District Commissioner (Williams 1966:7) and by a former Agricultural Officer in the Northern District (Cheetham 1962:67-78) that it may be an appropriate time to reassess official credit policy, looking particularly at the criteria for providing credit to smallholders. Cheetham (1962:77) concluded: 'A farmer's ability to repay may be a better criterion on which to provide loan capital than the present notion of "credit-worthiness" in the sense of adequate tangible farm assets.'

Cash cropping and productivity

657 423 182 [311] It is too soon to determine the effects tenure conversion will have on cash cropping and productivity. However, even at this early stage a few observations may be made. The acreage under cash crops at Ombi-Tara has increased significantly since conversion. Before conversion was introduced, 167 cocoa trees, 92 coffee trees and 19 bush rubber trees were planted per adult male at Ombi-Tara.[2] In the fourteen months after the villagers began planting high yielding rubber on the converted blocks an average of 304 seedlings was planted per adult male.

[434] There is no shortage of food or suitable agricultural land. Both terrain and climate are favourable for growing rubber. There is easy [464] access to Ombi-Tara from Popondetta. Villagers are able to earn money to buy rubber seedlings from the Department of Agriculture by tapping their bush rubber, by working on road maintenance, or by working for wages on the Sangara ex-servicemen's plantations. The proximity of the Sangara plantations and the existence of bush rubber stands at Ombi-Tara provided villagers with experience in tapping and handling [177] rubber. The Sangara plantations also serve to demonstrate a 'European way of life' which many villagers find attractive and wish to emulate.

[241] Tenure conversion appears to have contributed to the improved cash cropping performance mainly by reducing the labour inputs required to establish cash crop gardens, thus increasing labour

[1] For example, the processing of green leaf into tea requires substantial investment (Clayton 1961:623).

[2] Excluding the two 'outside' blockholders and a man from Tara who declined to be interviewed (see p.1).

262 The principal food at Ombi-Tara is taro, while other foods of importance include sweet potatoes, yams, bananas and plantain, edible pit-pit (saccharum edule) and a wide variety of leaves and bush cabbages. Bread-fruit, pandanus, betelnuts, coconuts, pine-
[224] apple, pawpaw, watermelon and sugar cane are also eaten. The main sources of animal protein are provided by wild pigs, birds, flying foxes and the occasional cuscus. These add variety but provide
231 comparatively little food. The keeping of domestic pigs in vil-
657 lages has been outlawed for health reasons by the Ilimo Local Government Council which serves Ombi-Tara, but one old man, a former clan leader, kept three pigs under his house.

342 Readily available natural vegetation provides housing materials. Timber is used for the framework and walls, blackpalm or timber for the floor, and thatched sago leaves for the roof. Houses have an average life of about four years.

162 The population of Ombi-Tara by clan and location is presented in Table 8.

Table 8

Resident population of Ombi-Tara by clan and location, January 1966

Clan	Ombi			Tara			Blocks			Total		
	M*	F*	C*	M	F	C	M	F	C	M	F	C
Mumu	20	20	56	1	1	2	6	7	13	27	28	71
Kuei	3	3	7	11	8	20	-	-	-	14	11	27
Total	23	23	63	12	9	22	6	7	13	41	39	98

M* Adult males. F* Adult females. C* Children.

[166] [167] [464] Note. In addition there were seven Ombi men and six Tara men absent from the area working for wages, that is, roughly one man away for every three remaining at home.

602 Kinship groups are of major importance in the functioning of village society in New [619] Guinea. Every individual is a member not [614] only of a parish but also of groups of closer [613] kin, a clan, and maybe a lineage. Lacking any system of payment in cash for services rendered, the villager obtains the assistance of his 602 relatives for heavy work such as the felling of 464 big trees to make a swidden, dragging a canoe 476 log to the beach, or making a long seine fishing net. Obligations thus incurred are met either by reciprocating when asked or by making a gift. The kinship group provides 602 social stability and in practice the pattern of 311 land use is frequently decided by the senior 241 members of the group. The planting of food crops by any member, even on land to which he does not control cultivation rights, causes no concern because rights to temporary usage may be easily granted, but the planting of tree crops, which may remain in the ground from thirty to eighty years, is a different matter. Planting tree crops is tantamount to alienating the land for at least a generation and very often some members, at least, of the kinship group object to such long-term use. Even if they do agree to an individual member planting tree crops, there is almost always the assumption that he must share any profit he makes with other members of the group. Individuals who have planted cash crops under these conditions generally become discouraged when they see the fruits of their labours being reaped by kinsmen who contribute little or nothing towards production.

In its attempts to stimulate production of 659 cash crops by indigenes, the Administration 423 has approved a series of land tenure laws, the 177 last and most radical of which was passed in 1964 providing for the registration by indigenes of individual freehold title to land: a measure designed eventually to establish a European system of land tenure throughout the Territory. In the meantime, such meas- [578] ures, by pitting traditionally conservative people against the products of modern Western education, are a cause of internal conflict within indigenous society.

632 The establishment of towns, unknown be- 177 fore the coming of Europeans, has forced an even more drastic adaptation than have the

changes in rural areas. For a man to leave his village and go to work in the town means long separation from his family and from his kin, an experience unheard of in the past. Separation from his relatives means that he may be facing dangerous risks from the sorcery of foreigners in an unknown country. This is one reason why migrant workers tend to live in kin clusters in the towns. Unemployment, inadequate living quarters, low wages, the necessity for paying in cash for all goods and services, and the obligation to send cash gifts to relatives in the villages, all add to the town dwellers' difficulties.

The three areas to be studied in this book are:

1. The north coast of Papua, near Popondetta, inhabited by the Yega people.
2. Central Bougainville, near Kieta, inhabited by the Nasioi people.
3. Port Moresby — two indigenous communities.

These three areas have been selected because they are all experiencing rapid change. Moreover, they are areas of actual or potentially great economic development. The stresses and strains put on the traditional way of life in such circumstances are particularly severe; study of such situations may help to give students a deeper appreciation of the problems faced by the people of New Guinea today.

Northern Papua and Central Bougainville are rural areas where the inhabitants have a primarily subsistence economy basically similar to that of their traditional culture, but modified by the innovations introduced by Europeans and latterly by their own educated younger members. There are, however, important differences which are summarised below.

Topography. Northern Papua is a gently-sloping, almost featureless plain, covered by rain forest interspersed with grassland, traversed by a few braided streams and many small creeks. Central Bougainville is mountainous with peaks up to 7,000 feet above sea level. Steep, tree-covered slopes, rocky outcrops, and rushing streams which rise rapidly after rain are typical features.

Social. The social structure of the Yega is localised patrilineal clans, sub-clans, and lineages, inhabiting a few square miles of land.

[P3-B]

614 No male member of a Yega clan has any rights
423 whatsoever to land outside the consolidated
block of parish territory. All Nasioi, on the
000 other hand, are members of widely dispersed
matrilineal clans. Many of them, both men
and women, have rights to cultivate land far
from their village of residence. For a Nasioi,
the focus of loyalty is not the clan as a whole
but the small segment of it with which he (or
she) is intimately associated, in the parish
where he lives.

177 The degree to which contact with Euro-
peans has affected each group differs greatly.
[245] The Northern District of Papua where the
Yega live is the scene of recent rapid de-
velopment in cocoa planting by both Euro-
peans on large plantations and by indigenes
241 on small-holdings. The Yega are a relatively
433 well-educated group of people but they have
a record of failure in the production of cash
[464] crops. Many of the younger Yega have there-
fore left the parish territory to work for wages
in skilled and semi-skilled jobs in the towns.
000 Fewer Nasioi go to work in the towns but
many have worked locally as plantation
labourers. Recently copper has been discovered
within their territory and now many men work
for the mining company which offers higher

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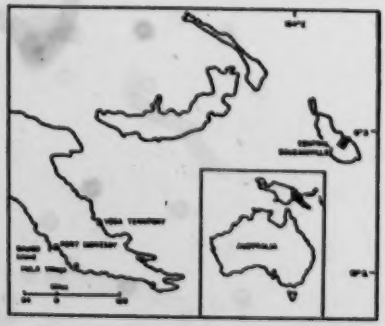

Fig. 1. Location of the three case studies

[P.4-A]

18: Dakeyne K-5 (1962-1964) 1969
OJ23 Orokaiva OJ23
Yega

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[A villager shows off the fighting head-dress of his father. It is intricately made of boar tusks, shells, feathers, and horn-bill beaks.]

THE YEGA OF NORTHERN PAPUA

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[161]

THE Yega is a group of nearly 900 people living in sixteen settlements, on an area of about twelve square miles, on the north coast of Papua. They live on a gently sloping alluvial plain between Mt Lamington and the sea. Yega territory is bounded by one large stream and crossed by several small creeks.

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The plain was originally covered by mature rain forest 100-120 feet high, interspersed with elongated strips of grassland. Now, much of the original forest has been cut down, and secondary forest forty to fifty feet high has

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replaced it. The climate is hot and wet throughout the year (Köppen Af.) but there is marked seasonality of precipitation. The north-west monsoon, November to April, brings two-thirds of the annual rainfall (average 100 inches per year); July and August with about four inches per month are relatively dry. The temperature is over 80°F on most days and rarely falls below 70°F on the coolest night, but the heat is alleviated by north-easterly sea breezes which blow during the afternoon and evening throughout the year.

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The first reported contact between Europeans and Yega was during an expedition along the coast by the Lt Governor of Papua, Sir William McGregor, in 1893, but the first real step in the process of change occurred with the establishment of an Anglican mission school on Waususu Point in 1909. From this

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time until the outbreak of World War II, Yega men began leaving their villages to work

466 [P.5-A]

for short periods as indentured labourers on the newly-established European plantations or on the wharves of Port Moresby or Samarai. Most men sampled the novelty for a short time but quickly returned to the village; some showed little interest in the wider life introduced by the white men but a few were greatly influenced and spent years away from home in paid employment such as the Papuan Constabulary.

SOCIAL STRUCTURE

The Yega constitute a social and political unit and regard themselves as separate and distinct from the similar groups around them, even though all speak mutually understandable dialects of the same language. Each of these groups may therefore be termed a parish. Before the enforced abandonment of warfare early this century, these parishes lived in a situation of constant enmity and changing military alliances. In the absence of effective natural barriers on the plain, each group concentrated upon the production of its food supplies as close as possible to its home villages; tracts of forest which served as hunting areas and as reservoirs of wild food and building materials also served as 'no man's lands' surrounding the territory of each parish group. As hunting rights to these forest areas were obtained by daring individuals who ventured far into them, near the swidden areas of neighbouring groups, it is not surprising that such

[P.5-B)

361 The new village sites also reduced walking time to the gardens.

618 722 The war of 1939-1945 affected the Yega in several important ways. Their territory became one of the major battlefields of the Pacific War. Every person migrated from the area with the exception of one old crippled woman who somehow managed to survive for eighteen months in the bush. Almost all able-bodied men served in the army or labour corps and the women and children lived at another Anglican mission about thirty miles to the north. When they returned, they found all buildings, and any belongings that they had left behind, destroyed and most of their coconut palms cut down or damaged by gunfire. There were some compensations. The Australian Government paid thousands of dollars in war-damage compensation for all trees and property but, more important, the stimulus of travel, and meeting and working with Australian and American soldiers, gave the younger men in particular a broader view of life which triggered off changes in their traditional economy. In addition, the transfer of the Administrative headquarters from Buna to Higaturu resulted in the construction of a major road to the port of Cape Killerton and brought the Yega into closer touch with the outside world than ever before. As a result, between 1945 and 1950, about twenty families left their re-built villages and moved east to found the new village of Surilai at Cape Killerton (Fig. 9). Men living at Surilai have since found regular employment on the Government wharf at Cape Killerton.

648 701 722 727 729 659 199 177 491 361 166 [464]

178 433 464 466 Major post-war changes in the Yega economy have resulted from their attempts to increase their cash earnings. Before the war many men worked as indentured labourers on plantations or on the wharves at Port Moresby

(P. 13-A) [TEXT CONTINUED ON PAGE 14-B]

and Samarai. They were away from home for two years at a time and were not accompanied by their wives and children. Since the war they have not returned to indentured labour but have tried other ways of earning money.

The first such experiment was an agricultural co-operative, originated by a returned soldier who got the idea from one of his wartime Australian friends. Anglican Missionaries sponsored and directed the scheme and some money was made from cash crops of sweet potatoes, peanuts, and rice. However, when the money was shared amongst all those participating, it was a very small return for the amount of work and there was widespread dissatisfaction. The scheme was finally doomed to failure by two events—the permanent return to Australia of the mission organiser in January 1950, and the death of the Yega leader in the Mt Lamington volcanic eruption in

[P.14-B]

361 He has now cleared bush and planted gardens
423 all round and claims, by right of usage, a much larger area than was originally allocated to him. The establishment of freehold title must reinforce dispersal, so it is significant that in August 1964 seventeen Yega cocoa-block holders were among the first people in New Guinea to apply for freehold title. The parish elders did not oppose these applications.

245 Yega expectations in cocoa plantings as a
458 source of cash income have not been fulfilled. The trees began to bear in mid-1964, at a time when, unfortunately, the world market was
[439] depressed. Growers received only three cents per pound for wet beans from a European-managed fermentary near Popondetta; by mid-1965 the price had fallen even lower, to two
245 cents per pound. The discouraging effect of
433 such prices was reflected in the low production of cocoa during the latter half of 1966, when forty-eight growers produced only 1,866 pounds of wet beans valued at $74.64, an average of under $2 per head. By January 1967, the well-cared for plantations of 1964 looked overgrown and neglected and it was obvious that apathy had replaced the early enthusiasm.

245 The Yega cocoa-growing scheme outlined
178 above well illustrates the conflicting traditional and modern socio-economic attitudes commonly found in New Guinea today. Traditional aspects are:

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423 a) The use of communal labour to clear the rain forest and the subdivision of the area among those who helped.

464 b) The absence of any documentary record
[476] of the transference of cultivation rights to individuals.

c) The organization of group labour for certain tasks—individual right-holders to cocoa blocks were assisted by their kin in tasks such as cutting grass and opening the cocoa pods—and the subsequent obligation on the right-holder to repay such work by sharing his profits.

d) Personal control by each individual of the economic trees which he planted on his block.

245 Aspects which have little precedent in tradi-
177 tional custom but result rather from the acceptance of new principles are:

a) The systematic layout of blocks.

[P.16-A]

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177 b) The production of crops specifically for sale.

[654] c) The acceptance by the indigenes of
[657] supervision and advice from European and indigenous members of the Agriculture Department: people with whom they had no kinship ties.

[423] d) The location of houses on the blocks.
e) The registration, by some individuals, of freehold title.

245 It is unfortunate that the scheme which appeared so successful in its early stages should have failed largely because of circumstances outside of the people's control.

464 Many Yega have made no attempt to earn
[434] cash from commercial agriculture. From the time of earliest contact with Europeans some
166 of them have left home to work for wages. At the present time, almost one third of them are absent working, studying, or as dependents.

464 Forty-four per cent of all Yega men are away
178 working. Those who are married are accom-
592 panied in almost every instance by their wives
166 and children. This situation represents a marked change from the pre-1940 years when many Yega men worked as indentured or casual labourers and could not take their dependents with them. Nowadays most Yega
[466] work in semi-skilled or skilled occupations in which family accommodation is often provided by employers. Even if accommodation is not supplied, the breadwinner's earnings are apparently adequate to provide living quarters for his wife and children; frequently town accommodation is of poor standard but evidently family life is preferred to separation.

871 The main factor in the marked improve-
178 ment in skills is education. The educational opportunities which have been available to the Yega for nearly fifty years have been exceptionally favourable, when compared with
[797] those of most other New Guineans. A mission school has operated in the area since 1909; since 1932 (except for war years) it has had at least one European teacher permanently on
[464] the staff. This educational background has enabled the younger generation of Yega men to take advantage of opportunities for employment in posts of responsibility and higher income which have become available in increasing numbers during the post-war period.

[P16-B]

18: Dakeyne K-5 (1962-1964) 1969
OJ23 Orokaiva OJ23
Yega

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Absence from the village, particularly by working-age males, is now an established social pattern among the Yega. Fifty-one per cent of all adult males are absent, in paid employment. For unmarried men, the percentage is seventy-seven. Of 100 adult men working away from the village, twenty-three had been away for ten years or more; in four instances separation from the village was virtually complete, three having never revisited their village and one only once in thirteen years. This means that many Yega can no longer be classified as 'temporary' absentees. However, most wage-earners still return to their village for annual holidays.

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All wage-earners send a portion of their earnings to their older kinsmen who remain at

[P.17-A)

731 afterwards, but most of those who attended church that morning were killed at Sangara. All spoke of the cloud of fire that descended after the explosion. One man described how he saw it killing people ahead of him and how, with his brother, he ran past the burnt bodies. Another man told that the wind hit him and threw him down; for hours he remained unconscious and the people who were with him had all gone.

When the blast came, everyone near the mountain began to run away from it. In this mass flight, some near the edges of the area of devastation were saved by strange accidents, such as the couple who sat down to pray and then a wind came and blew the hot dust back to the mountain. This gust of wind was mentioned by several survivors. After the explosion, a very wide area, far beyond the area of devastation, became covered with a black cloud so that the fugitives soon found themselves running in total darkness. Most of the fugitives say that they fled to the Sangara Plantation, a point directly North of their villages and outside the immediate danger zone.

Sangara Plantation lay, and still lies, on the only "arterial" road of the district, which runs from certain coastal points to Kokoda; it also lay on the branch road which led to the pre-eruption government station at Higaturu and the pre-eruption mission station of Sangara. Thus Sangara Plantation became the first rallying point for the fugitives from the Sangara side of the Mount Lamington slopes. There was, on this first day, a steady stream of people descending on the plantation but it seems that to some extent this point was regarded as a haven of safety. It lay outside the area of partial devastation; the only effect of the eruption was the darkness enveloping the plantation and the scattering of debris.

[464] The plantation, where rubber and cocoa are produced, employed a number of Orokaiva men as well as men from other districts. I shall describe later how the plantation very soon became a centre for the Australian rescue and resettlement organisation. At the same time it became a base for Orokaiva men who soon began to rush back over the devastated countryside in the hope of finding relatives who might have survived.

Along the Western slopes, the eruption caused few casualties but no less terror. The greatest immediate danger to life were fallen debris, especially large stones which formed deep pits in the village grounds and demolished some of the houses. Pumice and ashes also fell over the countryside to a depth of some inches and visibility was very low. Most people moved down the mountain slope at once, along the bush tracks but mainly along the branch road running in this direction was Mr. C. Searle's estate in Awala. Like the Sangara Plantation, this lay on the arterial road to Kokoda. It seems that some of the fugitives, including those belonging to the village now called Sivepe, stayed at this plantation

245 but would estimate plantings to be about 4,000 trees, occupying
177 an area of eight acres.

Among resources which produce significant current income in
311 Sivepe and Inonda, two other types must be briefly mentioned here, though they must be more fully discussed elsewhere. Income is
434 earned by men who are normally resident in the villages. When these men are married and living away from the village with their
167 families, they provide support to the home people on critical occasions and also, when villagers pay visits to them. I briefly met a few Sivepe men who settled in Port Moresby and these men were called upon, during the year of my study, to pay several plane fares and feed several men who tried their luck in looking for jobs in Port Moresby.

167 Secondly, men who return to the village after outside employment are bringing savings into the village which forms a
464 significant source of revenue. Such savings often form part of the bride-wealth paid by clansmen and it is thus the affines who spend
[583] it. During the year, four Sivepe men went to Port Moresby for employment and three returned; one Sivepe man took up a job on a plantation for awhile, largely to pay overdue taxes; a number of
434 men ordinarily working outside came home for short visits. Probably
837 the most regular income is derived from absentees when the men go out to work by themselves, leaving their wives and children behind
613 in the village. Six such split families existed in Sivepe; in every case, regular envelopes containing money were posted to the wife. In the cases I investigated, eight to ten envelopes arrived in a year, each containing $10 and sometimes $20. These envelopes represent a considerable percentage of village income. As long as the money keeps coming, a man knows that his relations will closely watch his wife and will carry out obligations towards his affines; thus, his wife will be kept under strong moral constraint from all sides. It would be cynical to explain the generosity with which men maintain their wives wholly by such motives, but the Orokaiva do regard "looking after" the wives of absentees as a valuable service and the envelopes are thus a form of repayment. "Looking after" the wife and children, indeed, comprises a wide range of services which must be performed by men of the lineage and which are a reasonable charge against the income of a wage earner. As most places of employment in Papua-New Guinea do not provide for married accommodation, we may regard villagers and migrants as engaged in a joint economic enterprise in which each group performs services and obtains benefits.

464 At the time of the eruption several Sivepe men were working on plantations; today, Sivepe people are interested only in the better-paid town jobs, mostly in Port Moresby. In Inonda, however, two men often take up short spells of plantation work while a third, trained as a driver by an anthropologist, has a regular government job in Popondetta.

628 guests, it appears that they were friendly but rather formal. As
574 will be shown later, all arrangements in connection with Ilimo
731 camp were made between the government and the Ilimo people; the
[657] Orokaiva had no forms of organisation, in 1951, through which the refugees could have negotiated directly with Ilimo. The hosts generously supplied food, grew extra food in special plots, provided abundant building material from their land, and a site for the camp and helped with the preparation of the camp while the evacuees still lived at Wairopa, in return for which the government made various gifts which Ilimo evidently regarded as adequate payment. At no point, during the existence of the camp, did the refugees develop an organisation which dealt directly with the Ilimo people. Thus, the only contact between hosts and guests was on a social level.

The camp was built at some little distance from the village. Refugees who had friends and relations in Ilimo used to go over to the village and visit them. There was for instance, at the time of the eruption, one Sivepa man resident at Ilimo; thus some Sivepa people paid visits to the village. There was an Easter celebration at the camp to which the village people came. When the camp broke up, the government gave a feast to the Ilimo people, on behalf of the evacuees, in the usual Orokaiva style.

121 If we wish to answer the question to what extent contact between different "tribal" groups (or distant groups) of Orokaiva has become more intensive since the eruption, we cannot confine ourselves to contacts occurring in villages such as Sivepa or Ilimo. Here the pattern suggested in the previous pages has hardly [178] changed. The changes have occurred by the development of new organisations (to which I shall refer later) through labour migration and through urban development.

464 As I see at present discussing only unorganised contacts
166 between villagers, I can give only one clear instance of changing
633 attitudes and this is in Popondetta itself. Popondetta, the new
[162] administrative centre of the Northern District, has about 4,000 inhabitants, almost all Orokaiva; among its inhabitants all parts of the Northern District are represented, including Sivepa. The Sivepa people had many relatives there, mostly hailing from the Sasembata district, and employed in some regular job in the town. These jobs are partly in personal service to Europeans, but also in light industry, the retail trade, public works and public service, and go far beyond the little employment that was available in pre-eruption Higaturu (with a population which, judging from aerial photographs, can hardly have exceeded that of a large village).
484 Popondetta is preeminently the place where intelligent men from
521 various villages can gather informally to discuss political and other
633 public questions, and develop a wider interpretation of the situation of the Orokaiva which is learnt by the men from the villages when they pay occasional visits to Popondetta. The town generates a new

177 the people. He was the only white man in the district (omitting the anthropologists) who actually did this. Finally, some people
●[464] of Sasembata district were familiar with taupa as workers and in personal service, as cookboys, housegirls, etc. outside the village.

The only taupa residents in the district were the head
[875] teacher and his wife; they had daily personal contact with village
[439] people especially because they bought vegetable produce for the mission, while people also approached them with a multitude of minor problems, e.g., pressure lamps that did not work, troubles at school, help needed with sports or the sewing programme of the women's club, etc. Most Sivepa men and nearly all the women were too shy to approach them. The head teacher used the Papuan priest as an intermediary when he had to approach Sivepa men when help was needed for school buildings, or when land was needed for the gardens of the mission teachers. The other taupa came to the district no more often than once or twice a year; the doctor attended patients only at Saiho; the magistrate sat at Higaturu; the nearest white planter was at Awala.

657 Characteristically, contact between the taupa and villagers
177 occurs either through the mediation of Papuan functionaries--and it is thus that basic ideas are mostly communicated to Orokaiva leaders and groups--or directly, when taupa finds it inexpedient to
[242] delegate decisions on problems affecting individuals. This tendency to deal with individuals rather than leaders or corporate groups is self-evident from the roles of many taupa (educational, medical, judicial) but I noticed it also in, for instance, agricultural extension work. Here the emphasis was on the educating of individual growers. The administration is not in favour of cooperative cash-cropping ventures, so that dealings are of necessity mostly with individuals. When it is desired to indoctrinate groups, the most useful channel at the present time is the Higaturu Council, so that the taupa's message reaches the people through an Orokaiva intermediary. The patrol officer, when visiting a village, for instance for census purposes, tends to deal with his audience in three types of ways: (a) he deals directly with the "committee" for the formal arrangements of calling the people together and to obtain what facilities he needs for his work; (b) he makes a speech expressing the desires of the government, to the assembled people; (c) he addresses individually those individuals against whom he has complaints, and he does this in front of the assembled people. These individuals, on the occasion I witnessed, received a reprimand, but they might also be arrested and jailed. This kind of meeting is held yearly in every village.

Undoubtedly, the patrol officer consults both with the councillor and the committee member in charge of the village. It was clear from his treatment of the complaints on his list that he had not only consulted, but also trusted these two local leaders. The cases with which he dealt were all connected with the policy of

177 829 concepts drawn from the scene of world affairs. While among the Orokaiva, I heard talk about Vietnam, Indonesia, Africa, India. The political orientation displayed was a mild kind of nationalism, and [203] a sense of closeness to newly independent non-white states. But the information, derived from radio broadcasts and speeches by councillors, introduced an acculturative kind of perspective. Its dissemination is being actively encouraged by the Australian authorities.

465 [464] Use of money: Before the eruption, money played a very minor role in village life. It was earned by men who were *away* for limited periods working on plantations. Money wages on plantations were, and are, extremely low; wages for agreement labour in 1962 were, for instance, $39 per annum for the first year of which $12 is paid out in monthly installments and the rest at the end of the year. In the second year, the rate rose to $45.50 p.a. (Howlett, 1965) Urban wages are a great deal higher than this; most Sivepa men who were absent on employment worked on urban jobs. At the same time, a regular income was derived from coffee.

464 435 438 Sivepa men were simply not interested in jobs at plantation rates of pay, nor were they interested in "carrying" jobs for the government even though wages in that case were higher. They were also indifferent to selling their garden products on the Saiho and Popondetta markets, as there were frequent gluts, prices were low and carrying goods to market was an unduly arduous task.

436 511 Money was used largely to buy goods in the luxury rather than the subsistence sphere. Money was essential for payment of taxes and for a minimum of clothes, often acquired cheaply at jumble sales. Otherwise, it was used to buy tobacco, food for feasts, kerosene mainly used for feasting occasions, cartridges for hunting, again for feasts. Among the larger purchases made were radios, pressure lamps, bicycles, tools; all these, however, could never be paid for with current income. One had to depend on special windfalls: a gift from 454 a relative in town, a bride price. Money was not only for spending, 556 however; it was also for saving. I shall refer to the organisation of corporate saving later; in addition a number of Sivepa men had savings, of the order of $10-$20, sometimes more, hidden away. This money was kept for special occasions, but in addition, the very fact of possessing it was regarded as important. I was once told that Europeans were powerful because they had money; the Orokaiva could get power only if they too possessed savings.

436 437 If money was definitely highly valued, it was only to a limited extent regarded as a standard of value. If we accept some model such as was suggested by Salisbury (1962), we may say that the Orokaiva have three spheres of exchange: a subsistence, luxury and ritual sphere, while bank notes are used for special, often ritual occasions.

[461] In the acquisition of luxury goods of any kind, including money, the Orokaiva tend to weigh the benefits gained by them against their cost in time and unpleasantness and against the benefits that can be gained from other investments. Money is, in general, wanted only if it can

CHAPTER II: Socio-Economic Factors

Section 1: Age, Sex and Marital Status

In this chapter, the study of internal variations will be continued, by a consideration of the human resources available to the villages and their economic productivity. A statistical analysis of the population by age, sex and marital status (see Table 16)[A] shows that the labour force lacks a proportionate number of young men in early adulthood; the number of men in the vigour of life is somewhat smaller, in Sivepa, than the number of women. The reason for this change is that young men leave the village to earn money elsewhere. They often do this before marriage, so that the bachelors' houses tend to be occupied by a much smaller number than formerly; but after they are married they usually do not at once settle down in the village. It is unusual nowadays for a brideprice to be paid in full at the time of the wedding. Usually this payment is delayed; the young husband goes out to work for it and after one or two years he sends back money and it is paid. At the one brideprice payment I observed in Sivepa, the groom was not even present. He was at his job in Port Moresby and the role of groom was taken over by another man from the same lineage--a married man with six children, as it happened, who duly cut the firewood and carried the water required for the entertainment of his affines. Even after the bridewealth is paid, then, the husband continues to work at his job, rarely seeing his wife as travel is expensive and leave infrequently granted.

Because of these infrequent visits, young wives have few children, but they receive regular gifts of money from their husband. Eventually, the husband returns home; it is hard to say just what makes him decide. Before the age of 30 he usually starts to establish a family, and he then stays home continuously, to look after his garden and his coffee. He may occasionally go back to town for a few months to earn money, but judging by the few examples I saw, he is not always successful at finding a job and even if he does so, he takes an early opportunity or uses an early excuse, to return home, carrying home some presents for his family and perhaps a little money. The family does not seem to be too troubled about the loss of earnings that result from his return. Some men manage to find accommodation for their families in town, in which case they all migrate.

This generalised picture needs qualifying. There were six Sivepa women (out of nine married women with absent husbands) who received regular gifts; three of these women were living in the household of a single man while another family head had under his control two

[A] [See Cat. 116, pp. 221-222--Analyst]

593 further such lucrative young females. Of the six, two were Sivepe
592 women while the other four were women from other villages residing virilocally. A great many other families did not derive income in this way. Some of these, however, had daughters living in other villages, and their husbands too were sources of institutionalised gifts.

464 Though Waddell showed that the loss of adult male workers
433 through migration is already serious (37.8% in Sivepe and 25% in Inonda), the point had not been reached when the loss of manpower led to a decline in the production from garden lands. Waddell may, however, be right in ascribing the increasing consumption of the inferior Xantosoma taro (see page 35 above)[A] to the deflection of the
887 adult male labour force which had to support old people whose vigour had declined. The older men did not stop work abruptly at a certain age; they would continue to go to their gardens, but the areas cultivated would become smaller; their children or young affines would help them. If an old man became widowed his daughter or daughter-in-law would cook food for him: in the case of a widow, uncooked food might be
[463] given, but most widows tend to live in a house where there are male relatives, the only two exceptions in the sample being the two widows who stayed in the old village of Sivepe. There are also activities which are a specialty of the old: they tend to be the village artists and also the village sorcerers. When we wanted to buy artifacts, it was the old men who made the ornaments, the old women who made the best pots and painted the best bark-cloth. Similarly, the most active curers in the village were two old men and one old woman.

595 I saw no evidence of polygamy currently practised. Marriages
585 were always consecrated at the time the couple was baptised. Several
586 people had at one time been divorced, but this was prior to the time of baptism.

In Inonda, as I wrote earlier, no absent husbands sent money
464 home. The only woman at Inonda whose husband was away from the village was in jail, after breaking into a trade store with a hammer belonging to another man from Inonda. On the other hand, one man earned a living as a government driver, thus becoming more or less removed from the work in his subsistence and coffee gardens. Some other men took over his work, in return for appropriate counter gifts and services. In both villages, therefore, a pattern existed of outside earnings derived by a limited number of people whose garden work was taken over by other members of the village labour pool, while the money earnings were in one way or another widely shared among villagers.

Section 2: Division of Labour

114 The division of labour was the special subject of a study
464 carried out in Sivepe by my predecessor, Mr. Waddell. As he has been

A [See Cat. 116--Analyst]

114 kind enough to show me this study in manuscript, I shall utilise it here. The general question with which Mr. Waddell is concerned is
464 whether earlier students of societies depending on shifting agriculture are right in saying that such societies, at least in fertile regions,
[166] have a considerable potential labour surplus. He proceeds to argue
[167] that, in the light of detailed data on the use of time in Sivepe, what potential labour surplus there might once have been has already been taken up by labour migration of male adults (which, for his sample, he puts at 37.8%). Waddell takes issue with Fisk (1962: 465) who defines economic activity as comprising only the production of food, clothing and shelter, and argues that, given the existing socio-economic matrix, all the other activities listed on his time charts (see Table 5) should be regarded as economic because they buy status and security.
[412] He also takes issue with Salisbury (1962: 216-20) who proposes that
[461] the change from a stone-to-steel technology in the New Guinea Highlands has resulted in a saving of two-thirds in the time allocated to specified axe-using tasks and who concludes from this that a vast potential labour surplus is thus created. Waddell shows, by a quantitative study of the allocation of time <u>within activities</u>, that only 38.5% of the time allocated to an activity is actually given over to the main task, and even if one includes ancilliear, and other productive tasks, this raises the proportion to less than 50% of the total time devoted to that activity. (See Table 17.1) As steel implements are used for only a portion of productive tasks, they did not, Waddell argues, make a crucial difference to Orokaiva work patterns.

114 If at the time of Mr. Waddell's study (1964), the potential
464 labour surplus in Sivepe was small, how was it possible to fit in such
461 new additional activities as the growing of coffee? Mr. Waddell was in an excellent position to discover this as at the time of his survey
241 seven of 15 households surveyed engaged in cash-cropping; he was therefore able to inquire how this affected the time spent on subsistence food production. As it happened, the median time spent on subsistence gardening by the whole sample equalled precisely the median time spent by the cash-cropping households. (12.6 hours per week, vide his Table 5:5) It appears from the table I derived from Mr. Waddell (my Table 17) how the cash-cropping families fit in this extra work: they spend a great deal less time having rests and meals. While non-cash croppers allocate only 28.4% of the time within activities to their main task, the cash-croppers allocate 50.6%. Though Mr. Waddell gives interesting explanations which account for part of this discrepancy, even if full allowance is made for these, the fact remains uncontestably that the cash-croppers simply work harder.

114 Mr. Waddell proceeds to show, by a detailed psychological
241 assessment of the cash-cropping individuals, that they are indeed the most acculturated and industrious members of the community. This
177 seems to suggest a considerable heterogeneity in working habits as between the members of the community. The author clearly shows this heterogeneity to exist as between the sexes and between different age
A,B [See Cat. 116, pp. 209-210, 223-224, respectively--Analyst]

CHAPTER VI: Addition and Loss of Community Members

161 Though the population of Sivepa has increased between the years 1951 and 1967, this increase is less than might have been expected after the settling in Sivepa of two additional Jegase families and six Sorovi households. An analysis of Table 16 will show that the net [166] population increase in 16 years corresponds very closely to the increase due to the immigration of 15 Jegase and 26 Sorovi people into Sivepa. The 1951 figures showed 40 children who, today, should range between the ages of 17 to 35; 15 of these were boys. Looking at the present Sivepa population, we find only six men of that age group and only three of these were children in Sivepa in 1951 (the other three are immigrants). This depletion of the 17-35 year age group is one of the most striking features of the present population structure.

The second striking change is in the number of children--there are almost twice as many of them in Sivepa today as there were in 1951. [158] It seems likely that this increase should in part at least be due to [165] the improved health services: the monthly clinics, with the possibility of immediate referral of young children to the Saiho hospital, do save 167 a number of lives, even if the mortality rate is still high.

166 The migration of young women into and out of Sivepa is a continuous process due to virilocal residence; a far more significant [591] demographic process is the outflow of men as a result of labour migration. Rimoldi reported that ten male siblings and sons of householders of [464] his (Jegase-Timunu) sample were employed outside Sivepa in 1962; in 1966, I found that this figure had risen to 12. I have only included men who had been residents of Sivepa and who had left, as adults, to find work. By this criterion, it would not be possible to class absent brothers and sons of Sorovi men as "labour migrants from Sivepa," as these men had never lived in Sivepa at any time but had [614] been residents of Curumbi before they became labour migrants. There [177] were, at the time of the survey, no labour migrants of the Seho clan. The fact that Jegase had many labour migrants while Seho had not even one certainly accentuated the relative dearth of contact with the outside world that characterised Seho. On the other hand, we should not read too much significance into it. It so happened that the Seho men came from very small families; most of them actually had no adult brothers living, and though they had many children, the only adult children they had happened to be girls. Thus they collected a disproportionate amount of bridewealth but could not contribute much to the external labour market. The Seho men were not actually as cut off from the world as these statistics might suggest: all had sisters' sons and sisters' husbands, real or classificatory, who were labour migrants; two had themselves been labour migrants earlier in life. In

A [See Cat. 116, p. 225--Analyst]

a village as small as Sivepe, statistical samples will sometimes show freakish features of which the sociological significance should not be overestimated.

Nine of the 12 labour migrants came from two of the families, namely the family of the village constable and that of the man who was councillor for Sivepe over the years following 1956. The other migrants came from three further Jegase families. The reason for all these movements was, of course, the absence of employment opportunities close to Sivepe. One absentee from Sivepe was a boy of the Seho clan who was at a secondary boarding school (Martyr's school, at Agenahambo).

Dissension was the reason for both the major migratory movements into Sivepe. The two Jegase families who came to Sivepe around 1956 were originally residents of a hamlet near Binduta called Korinasusu. All the other families of Korinasusu belonged to a different clan (Usohu). Conflicts between the groups arose; one Jegase man felt sure that deaths in his family were caused by Usohu sorcery and left. Another Jegase man was then accused of sorcery against Usohu and decided it would be wiser if he left too. At one time, such families might have set up a separate hamlet, but the government pressure towards consolidated villages led to their settlement at Sivepe, where there were a number of other Jegase families.

I was not able to reconstruct precisely what led to the Sorovi migration. Two of the men who settled in Sivepe were brothers of the Carombi feast leader and the other men were linked with these two by affinity or close friendship, as well as common clan membership. It is a general principle of Orokaiva family structure that the oldest brother in any family has absolute control over the family land and other family assets; he takes the place of the father. There is no sort of appeal against his decisions. He has the duty to "look after" his younger brothers and see that they prosper. If he fails in this task, the younger brothers have only one recourse; namely, to leave. In practise, the oldest brother is often compelled to divide up the patri-money when such a split-up occurs. Certainly this is what happened in the present case. The younger brothers renounced their elder's protection and started out on their own. Again, due to government pressure, they joined an existing village rather than starting a new one, as they might once have preferred.

Sivepe was chosen for several reasons. One of them undoubtedly was the link that existed through the three women from Ajoro who had been captured and taken to wives by men from Carombi and Sivepe. The descendants of these men regarded themselves as bound by common ancestry, because the three Ajoro women were regarded as being closely related (nobody could say how, but the fact that they came from the same village was said to be sufficient). This was a link between Sorovi and one lineage of Jegase; there were also specific links with a Seho lineage. Furthermore, as was often emphsised to me, there were links of hereditary friendship. Also, the families had land very close to Sivepe.

657 Garombi was a somewhat delapidated settlement. The government
621 and the council were said to favour its dissolution and incorporation
into Sivepe and Binduta. This project was favoured by Sivepe which
166 was keen to enlarge its size. Sivepe could see that under the modern
dispensation, the greatest favours always went to the largest villages.
167 The large villages had shops, water supplies, a club house; the coffee
truck stopped there, and so on. There was also a prize for the most
improved village; here, too, size was thought an asset. In council
elections and many other contemporary situations, size meant power.
Sivepe was therefore eager to absorb these families, hoping that more
would follow. During the year of my visit, there were several meetings
about this with Garombi people; rumours of further migration were
hopefully spread around.

161 In contrast, Inonda slightly dropped in population in the period
under consideration. There was the same rise in the number of children;
[464] there was little loss through labour migration (only one man in 1962;
as Crocombe and Hogbin report; and still only one today). The decline
[166] in the number of households was due to dissensions; the households
shifted to neighbouring Ureo and Hohota. Perhaps this decline may be
[621] explained by the strong leadership exercised by one family--socially,
economically and ritually--so that anyone who fell out with that family
more or less had to leave. In contrast, Sivepe has several strong
personalities who had to make compromises with one another. Sivepe's
post-eruption development was shaped not by one dominant figure but
by several, each making a specific kind of contribution. Certainly,
there was factionism, but there was also balance between the rivals.
In the next two chapters, I shall deal with these two kinds of
internal pressure: the character of the key personalities and of their
rivalry.

CHAPTER IX: Adherence to Tradition

Section 1: Conflicts Between Two Conceptual Systems

The Orokaiva of today has to act in conformity with two conceptual systems, one attributed to the ancestors and the other imposed by the mission and, to some extent, by the government. Essentially the system followed today is that attributed to the ancestors, but changes have been very numerous. These changes have mostly been conceptualised as substitutions and additions of the old system, leaving its essentials intact. At the same time, these substitutions have been calculated to ward off criticism from mission and government, and to cope with changed conditions.

There is, for instance, a taboo on using the names of affines. When the government pressed for the amalgamation of villages, affines frequently found themselves residents of the same village, which made the name taboo very awkward. The custom now is that the taboo is greatly relaxed for Christians; the baptismal name has only a mild taboo attached to it, while the severe taboo on the Orokaiva name bestowed at birth has remained unchanged. In dealings with Europeans, who do not respect the taboo (even though affines of a person are present), only the baptismal name is used. In the village, the Orokaiva names are now heard very rarely indeed.

The temporary labour migration of young men (who sometimes leave wives behind in the village) continues a traditional pattern of behaviour as young men used to go out in the same circumstances to hunt heads, but it is money they now bring back before they settle down. Bridewealth gifts have remained conceptually as they were before: there must be a pig or pigs, bark cloth, ritual valuables such as shell necklaces and feathers, cooking pots, but in addition new wealth is necessary: store clothes, "knives and forks" (i.e., kitchenware) and money. Here again, a change in detail has not changed the basic conception of the gift but rather has updated the details.

There used to be a ceremony to which a boy was subjected at or just before adolescence. This was the time when the boy formally assumed clothing. The boy used to be given his perineal band (bo) by some adult male cognate, often the man by whom the boy had been named. (Williams, 1930: 98) Nowadays, boys wear clothing much earlier in life, but the ceremony is still held as an occasion for honouring the child. It is now called a "birthday party"; as such it has the blessing of the mission while at the same time an essential part of a boy's life cycle is preserved.

621 station. The Horeopa leader, who was the owner of this land, then
361 invited these other clans to come over and make Hohorita into one united big village. When the clans came over in 1959, they followed the same pattern as the Sorovi immigrants followed in Sivepe: they arranged their houses so as to maintain, in a subtle but unmistakable way, their own identity. They formed in effect a second rectangle which formed a harmonious continuation of the first rectangle but which was separated by just half a chain. In 1966, the front and the back half of Hohorita held separate feasts, each inviting a different village. In 1967, the councillor made plans to clear the gap between the two halves, remove the two old houses which emphasized the separation and build new houses in the cleared area to join the rows together.

Around this time, the Sombou people began to establish themselves in Hohorita, leaving their old village behind. I think it was they [764] who filled the gap between the rows. The councillor had long been at [775] pains to close down the small villages of Sombou and Kakita and Sombou was finally persuaded after the death of an old migrant who had remained a pagan. As he could not be buried in the Christian cemetery, and people did not feel disposed to carry out the full involved ritual to placate the ghost, they preferred to shift their village. (They thought that pagan ghosts are far more dangerous than Christian ones.)

361 Hohorita, like most resettlement villages, lies along the main
368 road to Popondetta, 11 miles from Popondetta, seven miles from Saiho hospital, three miles from the Higaturu Council chambers. The school, conducted by the mission on Hohorita station, offers an education to the end of Standard 3.

621 The two feasts held in 1966 were intended to introduce into
433 Hohorita the pigless era advocated by all councillors. I arrived a
434 month or two after the feasts and by that time two very small pigs had appeared which were there for a special reason I have forgotten. Sombou and Kakita still had a normal complement of pigs. Coffee was [231] a somewhat bigger enterprise in Hohorita than at Sivepe. The trees [245] were much better looked after, and there were far more of them. Every man had his coffee garden and an income of $100 per annum from coffee was normal. Young trees were also being planted at a much faster rate. [166] Compared to Sivepe, there were very few wives whose husbands were permanently away working. The reason for this was that there are a number of plantations quite close to Hohorita and those who needed to work to pay off bridewealth, etc., could do so without going too far afield. Money to pay taxes and other regular outgoing expenses
464 would come from coffee. Men who were able to find skilled jobs,
167 clerical or professional work usually had their wives with them. An important resource of Hohorita, not shared by Sivepe, is the availability of good jobs within a reasonable distance; the fact that Hohorita families do not break up in the same way as Sivepe ones indicates that such separation is probably economically motivated. It is necessary for a young man to earn his trophies, so to speak, which in the modern world means money, but if he can do it without a prolonged absence from home, he prefers staying home.

731 Immediately after the eruption, the Sangara people decided to
[583] waive all bridewealth, so that a large percentage of the women in
Hohorita were married without one. At the present time, bridewealth
[464] is reinstated, and young men go to neighbouring plantations, which are
plentiful--or else further abroad--to earn them. While many husbands
[595] worked outside Hohorita, most of them were able to return home at
weekends. Polygamy was pronounced before the eruption, but it seems
that the polygamists became victims of the eruption and polygamy no
longer exists as a recognised institution.

871 If the average educational standard at Hohorita is slightly
above that of Sivepe, the reasons are: better facilities during the
years 1945-1951, loss of many members of the older age groups in the
eruption, special efforts made by Bishop Hand at Irihambo to draw
Sangara into mission teaching. This higher standard is reflected in
the statistics of persons who at one time or another have been in
skilled occupations. (Table 21)[A] The persons who returned to Hohorita
434 did so with the express idea of making some money out of coffee; the
average income from coffee in Hohorita is certainly far in excess of
that in Sivepe (about $100 per annum).

Hohorita does feel that it is held back by the present educational
871 provisions which are little better than those in Inonda and much
inferior to those at Sasembata. (At Hohorita, there is no schooling
beyond Standard 3, whereas Sasembata goes up to Standard 6.) Hohorita
people compare the school unfavourably with the government school at
the Sangara resettlement block which offers Standard 6, and which,
furthermore, has more highly qualified teachers on the staff. My
own impression was that the head teacher at Hohorita is a very good
man; some of the criticism of him is no doubt due to spite, for he is
of local origin. Still, the general criticism of facilities at
Hohorita is not unjust.

621 Hohorita is less homogeneous in ethnic origin than the other
563 villages discussed, as the population is drawn from different parts
582 of the Sangara tribe and intermarriage with other tribes has been
frequent. The explanation may be found in the pressure, after the
disaster, to find mates when most preferred potential marriage partners
had died in the eruption. This breaking down of the endogamous emphasis
after wars and disasters is, as I pointed out earlier, traditional
among the Orokaiva.

Heterogeneity was countered to some extent by an arrangement
423 which was, according to informants, made by a popular meeting shortly
591 after the eruption. According to this arrangement women who married
582 outside Sangara, would be allowed the same land rights as though
they had been sons. This was done in an effort, so I was told, to add men
to the depleted Sangara population. Men would thus be encouraged to
settle on Sangara land rather than take their Sangara wives home with
them. Two men from the Sasembata district are now living in Hohorita
under this arrangement. They keep up normal exchange relations with
their home district, e.g., I know one of them lent kambo for the kere

A (See Cat. 116, p. 228--Analyst)